

# THE RAILWAY GAZETTE

A Journal of Management, Engineering and Operation  
INCORPORATING

Railway Engineer • TRANSPORT • The Railway News

The Railway Times • Herapath's Railway Journal • RAILWAY RECORD.

RAILWAYS • ILLUSTRATED • ESTABLISHED 1835 • THE RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY

AT

33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1

Telegraphic Address: "TRAZETTE PARL., LONDON"

Telephone No.: WHITEHALL 9233 (8 lines)

Annual subscription payable in advance and postage free  
British Isles and Abroad ..... £2 5s. 0d.  
Single Copies ..... One Shilling  
Registered at the General Post Office, London, as a Newspaper

VOL. 83 No. 19

FRIDAY, NOVEMBER 9, 1945

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## TO CALLERS AND TELEPHONERS

Until further notice our office hours are: Mondays to  
Fridays 9.30 a.m. till 5.30 p.m.  
The office is closed on Saturdays

## ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret  
that it is no longer possible for us to answer enquiries  
involving research, or to supply dates when articles appeared  
in back numbers, either by telephone or by letter

## ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrange-  
ments due to the war, and less time available for proof  
reading, we ask our readers' indulgence for typographical and  
other errors they may observe from time to time, also for  
poorer paper and printing compared with pre-war standards

## Government's Nationalisation Policy

LAST week the Government announced two further steps in  
its policy of nationalisation. Cable & Wireless Limited,  
which operates telecommunication services within the Empire,  
is to be transferred to public ownership, and British civil  
aviation also is to be nationalised. Mr. Hugh Dalton, Chan-  
cellor of the Exchequer, told the House of Commons that the  
Commonwealth Telecommunications Conference held in  
London early this year unanimously had recommended a  
fundamental change in the organisation of commonwealth  
telecommunication services, including the public ownership of  
telecommunication services for all Commonwealth Govern-  
ments. These recommendations had been accepted by the  
United Kingdom Government. The decision to bring  
under State control British civil aviation is dealt with on  
page 471. In the case of both developments in the Govern-  
ment's policy, full details are not yet available, but the Cable  
& Wireless proposal has been criticised by Cable & Wireless  
(Holding) Limited, the parent company, as "impracticable  
and unworkable" and although the railway companies have  
decided to withhold comment for the present on the proposals  
to bring air services under State control, other interested  
parties have voiced criticism of the project.

## Business Experience Rejected

The rejection of important business experience from air  
transport, and the restriction of the discussions concerning  
the telecommunications decision virtually to public officials,  
together with the general omission to hold any public  
inquiries or publish any reports or evidence, has caused some  
disquiet. As was pointed out in the City Notes of *The  
Times* on November 5, private business detects an increasing  
tendency on the part of the Government to listen exclusively  
and in private to the views of the official world, not only on  
matters of public ownership but also on questions of official  
control and public trading over a wide field. It is felt that  
official impartiality, however high, may not always embrace  
impartiality towards extension of the power and functions of  
officialdom. Where an inquiry is made as to whether  
some economic function should be handled by officials or by  
independent business, it seems reasonable to claim that the  
views of independent business should be respected as neither  
more nor less biased than those of the officials. Secondly,  
permanent measures of State control or ownership should be  
justified either as being a clear political issue, or they should  
be the subject of investigation by an independent commission,  
with public evidence and findings, and time for public discus-  
sion before the drafting of legislation.

## Mr. George Hughes

The name of Mr. George Hughes, Chief Mechanical & Electrical  
Engineer, L.M.S.R., 1923-25, whose death we recorded briefly  
last week, is indissolubly linked with the Lancashire & Yorkshire  
Railway, on which he carried out his main work in connection  
with steam locomotive practice, and of which he was Chief  
Mechanical Engineer from 1904 until 1921. The amalgamation  
with the L.N.W.R. in 1922 saw him still at the head of his  
department, as did the formation of the L.M.S.R. When he  
took charge at Horwich the great Aspinall tradition was para-  
mount; moreover, as Aspinall had meanwhile become General  
Manager of the L.Y.R., it was only to be expected that his  
policy should largely survive. Nevertheless, Mr. Hughes  
introduced some important locomotives, chief of which were the  
four-cylinder 4-6-0s with divided drive, which, with modifications,  
later became the first standard express type of the L.M.S.R.  
In addition, powerful 0-8-0s and 0-8-2 tanks were added to  
L.Y.R. stock to Mr. Hughes's designs; but more significant,  
no doubt, was his early adoption of superheating, in which  
he showed himself well in advance of his contemporaries. Perhaps  
his best memorials, in addition to the many locomotives built  
to his designs which are still running, are his book, "The  
Construction of the Modern Locomotive" (1896); and his two  
papers on Horwich locomotives presented to the Institution of  
Mechanical Engineers in 1909-10, in which some notable appli-  
cations of scientific research to locomotive design showed the  
high state to which the art had been raised at Horwich under  
George Hughes.

## Colonel Norman A. Ryan

A wide circle of railway personnel in this country will learn  
with regret of the death of Colonel Norman Ryan at the early  
age of 54. Colonel Ryan was General Manager (Lines West),  
Chicago, Milwaukee, St. Paul & Pacific Railroad, and he

came to this country on May 26, 1942, as Assistant Chief of Transportation and Chief of the Military Railways Division of the United States Forces. He was a veteran of the Railway Transportation Corps of the last war, and his tactful and friendly personality did much in the establishment of happy relationships with British transport authorities. In the two years from his arrival in this country until he moved to the Continent with the U.S. Transportation Corps, he was a well-known and popular figure in railway circles. In co-operation with British railway officers, Colonel Ryan produced a 20-ton box wagon, which was adopted for use in this country as an alternative to the original plan to use 40-ton box wagons for American army purposes. His genial personality did much to assist in the fruitful solution of many problems associated with Anglo-American transport in this country in the months preceding D-Day, and to smooth away difficulties which were inevitable at a time of unprecedented transport pressure.

### Overseas Railway Traffics

The progressive increases in the traffic receipts of the Argentine railways during the current financial year which commenced on July 1 have turned to decreases in the last two weeks with the exception of the Entre Rios and Central Argentine Railways. The report of the latter company for the past year, referred to elsewhere in this issue, affords little prospect to holders of Argentine railway stocks of an improved outlook. Although the Central Argentine traffics increased during the year, this was due to tariff increases which were more than offset by higher fuel and wages costs. Ignoring for the moment the incidence of the unsettled political situation in the country during the past decade, it would seem that some better means of restoring the financial prosperity of the Argentine and some other South American railways will have to be found than by raising tariffs from time to time.

	No. of week	Weekly traffics £	Inc. or dec. £	Aggregate traffic £	Inc. or dec. £
Buenos Ayres & Pacific*	17th	122,187	- 8,437	2,099,000	+ 49,250
Buenos Ayres Great Southern*	17th	181,062	- 7,687	3,248,938	+ 319,438
Buenos Ayres Western*	17th	76,250	- 4,937	1,191,812	+ 41,437
Central Argentine*	17th	185,346	+ 26,478	3,226,037	+ 213,972
Entre Rios*	17th	26,412	+ 5,581	444,381	+ 45,325

\* Pesos converted at 16 to £

The trend of the Canadian National and Canadian Pacific railways is now downward, no doubt due to the reduction of war traffic requirements.

### Institute of Transport Anniversary Luncheon

The Minister of War Transport was the principal guest at the Connaught Rooms last Tuesday, when the Institute of Transport held a luncheon to celebrate its 26th anniversary. Sir Frederick Handley Page, President of the Institute, was in the Chair, and in the course of his address, which is summarised elsewhere in this issue, he referred to the desire of the Institute to have its own premises and to the need for funds to attain this objective. In a jocular speech he urged on the Minister the necessity for a suitable home being found for the Institute of Transport, and suggested that when the nationalisation of railways and other forms of transport was being undertaken by the Government, sight should not be lost of the needs of the Institute of Transport. Mr. Alfred Barnes in his speech, emphasised the importance of transport in a modern civilisation and suggested that perhaps he was in a strong position, as Minister, because he had no partiality towards any branch of the industry. He looked on each section as having its own contribution to make to the life of the people.

### The Egyptian Delta Light Railways

The official announcement that the control of this railway company is to be transferred from England to Egypt because 75 per cent. of the share capital of the company is now held in that country is another pointer to the loss of financial wealth and power sustained by Great Britain as the result of her efforts in the two world wars. The Egyptian shareholders have pointed out that they are called on to pay double taxation and have requested transfer of control to Egypt, which request the directors state they do not feel justified in opposing. The Egyptian Delta railways was a project born of British enterprise in Egypt during the nineteenth century. The company, which was founded in 1897 and registered in London, where the board of directors hitherto has been located, provided a network of 600 miles of 2 ft. 6 in. gauge lines to serve and develop the villages in the Nile Delta and connect them to the Egyptian State Railways. The Delta lines have proved of considerable

value to the fellahin in affording them transport for their cotton and agricultural produce; the tonnage carried annually has amounted to  $\frac{1}{2}$  million, in addition to which a heavy passenger traffic of some 16 million journeys a year has been dealt with. The local management of the Delta light railways was at the time of their inception placed in the hands of retired Royal Engineer officers, arising out of the military control of Egypt and the Sudan, and the practice of drawing on the Royal Engineer service for staffing these railways has obtained to the present.

### British Diesel Engine Export Pool

A number of British engineering companies has agreed to pool their research and technical resources so as the better to cope with the world's markets for diesel-electric rail traction. The companies concerned are Associated Locomotive Equipment Limited, Petters Limited, Mirreles, Bickerton & Day Limited, J. & H. McLaren Limited, Oil Engines (Coventry) Limited, Brush Electrical Engineering Co. Ltd., and other members of the Associated British Engineering Limited group of companies. The efforts of these undertakings in the diesel rail field are being co-ordinated by Associated Locomotive Equipment Limited. The group will produce a wide range of components used in the manufacture of diesel-electric trains and locomotives, including main engines up to 1,500 h.p. or more, generators, motors, control and switchgear, and all major components of power equipment covering the complete diesel-electric traction range. Mr. E. W. Marten, Managing Director of Associated Locomotive Equipment Limited, will be responsible for the co-ordination of the group's resources. An important feature of the work of the group will be the production of diesel-electric shunting locomotives for use both in this country and abroad. Export orders have already been received by the group, and among them is stated to be one for over a quarter of a million pounds, which will include a high-speed luxury train capable of 100 m.p.h. which will incorporate the most modern features devised for comfort and safety at high speeds.

### British Diesel-Electric Locomotives for Egypt

As was briefly recorded in our October 19 issue, the Egyptian State Railways have ordered from the English Electric Co. Ltd. a total of 27 diesel-electric locomotives, 12 for general service, including express passenger duties, and 15 for shunting. The company's experience with diesel-electric traction has been world wide, as in addition to the large number of shunting locomotives supplied to the L.M.S.R., the L.N.E.R., and the Southern Railway, its diesel-electric locomotives and coaches are in operation in the Sudan, Ceylon, South Africa, and Brazil. Further orders are in hand for the Great Western Railway, and for the Federated Malay States. The design of the shunting engines, in particular, has been tested so universally that very few modifications are necessary for the Egyptian order. They weigh 48 tons, and are powered by a 350-b.h.p. English Electric diesel engine; a trailing load of 1,040 tons can be hauled on the level. The general service locomotives weigh 116 tons, and the diesel engine develops 1,600 b.h.p. A maximum speed of 15 m.p.h. can be attained with an express passenger train. There are 6 traction motors driving two 3-axle bogies. The control scheme provides for multiple unit working, and there is a driving position at each end of the cab.

### Danish Diesel-Electric Streamliners

Credit for being the first country in Europe to restore its streamline passenger services goes to Denmark. As detailed on another page, from October 12 the Danish State Railways have restored their *lyntog*, or "lightning trains," on times, over journeys ranging from 265 to 327 miles, about  $\frac{1}{2}$  hr. to  $\frac{3}{4}$ -hr. more than those operating before the occupation of Denmark. It is clear that the large bridge over the Little Belt has escaped damage; as to the train-ferry crossing of the Great Belt, the schedules are arranged in such a way that on two crossings in each direction between Korsør and Nyborg a pair of these four-car units is carried simultaneously. The services reinstated are the "Kronjyden" and "Nordjyden" expresses between Copenhagen and Aarhus, Randers, Hobro and Aalborg; the "Østjyden" and "Midjyden" between Copenhagen and Aarhus, Langaa, Viborg and Struer; and the "Vesterhavet" between Copenhagen, Esbjerg and Ringkøbing. The last-mentioned service makes use of a single train, out from Copenhagen in the morning, and returning at night; on the other two routes the use of two trains over each provides morning and evening services in each direction daily. Each *lyntog* is operated by diesel-electric power.

### Pre-War "Postal" Speed Again

There are several features of interest in the restoration to normal peacetime working of the L.M.S.R. express generally known as the "West Coast Postal." With the 7.20 p.m. sleeping car express from Euston to Inverness, the 8.30 p.m. "Postal" is the first long-distance train in the country to be restored to full pre-war speed, and over certain sections, indeed, to a faster timing than in August, 1939. For example, the 89.7 miles from Perth to Aberdeen are now run in 95 min., as compared with 99 min. before the war, and the start-to-stop booking of 56.6 m.p.h. for the time being is the fastest in operation in Great Britain. Another notable booking is that of 101 min. over the 90 miles from Preston to Carlisle, a timing of 53.5 m.p.h. from start to stop that includes the negotiation of Shap summit, though this was 99 min. only in 1939. In the northbound direction the present 8 a.m. arrival in Aberdeen compares with 7.52 a.m. in the pre-war years, and in the reverse direction, leaving Aberdeen at 3.30 p.m., the pre-war 3.55 arrival in Euston is now 4 a.m. On the southbound journey the fastest point-to-point run is that from Forfar to Perth, 32.5 miles in 35 min., or 56.4 m.p.h. start to stop. Between Euston and Carlisle the pre-war formation of 14 vans, including 5 sorting coaches, is again in use, and Pacific locomotive power is assigned for the through journey between London and Glasgow in each direction.

### No Pullman Purchaser Yet

In pursuance of the Federal District Court order directing the separation of its coach-building and Pullman car operating business, and of its decision to abandon the latter, the Pullman Company has given the required six months' notice to the United States railways terminating its operation of sleeping, dining, and parlour cars from December 31 next. This notice is generally regarded as the method adopted by the company to inform the Federal Court at Philadelphia of its compliance with a recent court order, arising out of the original anti-trust suit, that either the capital stock or the physical assets of the sleeping car business must be disposed of not later than March 22, 1946. As yet, however, no purchaser has been found. Pullman first offered the physical assets of the business to the railways of the nation, on certain terms, and later made them an offer of the entire capital stock, but neither offer appears to have been received favourably by the railways. A definite approach to Pullman, for acquisition of the assets, has been made by an important financial group, but according to the latest information received, no definite result has yet been reached. If negotiations have failed by the end of the year, either the Pullman Company will have to continue the operation of the cars, or the railways will be deprived of sleeping car service.

### Unattended Substations on the G.I.P.R.

When the important 1,500-volt d.c. electrification of the Great Indian Peninsula Railway's main lines from Bombay to Igatpuri and Poona was undertaken, both attended and unattended sub-stations were provided; the remote control was effected by a well-known selector type of apparatus, already in service in India and elsewhere for traffic control telephone working with excellent results. As a rule, in the work as originally installed, each attended sub-station controlled one unattended one. It was found that the performance of the latter was in many ways the better, partly because the buildings were closed and locked, reducing the dust nuisance and the labour involved in cleaning the apparatus. These advantages and the possibility of reducing staffing costs led the management to decide to extend supervisory control to all the substations beyond the junction at Kalyan and the equipment is described in an article in this issue by Mr. E. C. B. Thornton, the Traction Engineer (Distribution). The methods used are substantially similar to those often met with nowadays in traction and other work and which have proved their merits. In this case the original apparatus being no longer obtainable, the existing items of it were concentrated on the Poona route and a new design adopted for the Igatpuri line based on principles used in ordinary automatic telephone working. The length of route covered is 135 miles.

### Riding Qualities of Vehicles on Rails

The critical study of the riding qualities of vehicles on railway track, and the influence of such factors as the articulation of the axles and the coning of the wheel treads, has not received as much attention in this country as it has on the Continent and in the U.S.A. It was therefore a wise move by the Institution of Locomotive Engineers to secure a valuable

paper, entitled "The Movements of Railway Vehicles on the Track and the Forces Arising Therefrom," read on October 31 by M. Roman Liechty, a Swiss member. The paper in several of its findings endorses the results of published research carried out on the L.M.S.R. shortly before the war. On the coning of treads, however, M. Liechty states that when the coning is reduced to 1 in 100 or thereabouts, excessive flange wear will result on straight track, due to increased amplitude of the wave motion set up in running. Test readings on electric rolling stock (L.M.S.R.), which are tabulated in a paper by Mr. C. W. Newberry, recently published by the Institution of Mechanical Engineers, show, however, that flange wear is a minimum with tyres coned 1 in 100, when expressed on proportional basis equivalent to 50,000 miles' running. Flange wear is generally found to be not proportional to mileage, and depends, (for instance) on whether the tyres concerned belong to a driving axle or not. Other valuable sections of M. Liechty's paper deal with the effect of articulating the axleboxes on locomotives with several coupled axles; the well-known Krauss-Helmholtz arrangement is not mentioned, but a combination of driving and running axles by Eckhardt-Schwarzkopff is shown in a particularly effective illustration of an articulated system of axles.

### Government's Air Plan

**A**NNOUNCEMENTS on behalf of the Government on November 1 in the House of Lords by Lord Winster, Minister of Civil Aviation, and in the House of Commons by Mr. Ivor Thomas, Parliamentary Secretary to the Ministry of Civil Aviation, made it clear that public ownership is to be the over-riding principle in the future air transport organisation and that existing surface transport organisations are not to be allowed any financial participation in the proposed scheme. The arrangements envisage the formation of three public corporations to operate all regular scheduled services within their assigned fields. These corporations will operate services to the same zones as were proposed in the White Paper issued by the Coalition Government last March. Thus the British Overseas Airways Corporation will be allocated services between the United Kingdom, and other parts of the British Commonwealth, the U.S.A., and the Far East; a second corporation will be set up to operate services between the United Kingdom and the Continent of Europe and internal British services, and the third will operate services between the United Kingdom and South America.

Under the Coalition Government's proposals the corporation responsible for the Continental and British internal services was to be controlled by the railways, short sea shipping lines and travel agencies, and the B.A.O.C., which was to have a substantial, but not a majority shareholding. Similarly, the South American services were to be controlled by the shipping companies associated in British Latin-American Airlines, with the B.O.A.C. holding a minority interest. These proposals have now been dropped and each of the three corporations is to be financed entirely out of Government funds. The Minister will appoint the Boards of the new corporations, but, as B.O.A.C. could not undertake British internal air services without an order of the Minister which requires long and complicated procedure, existing internal operators (principally the railway companies) are to be asked to continue operations until the corporations are formed. In the interim period before legislation is introduced operators will be free to run air services without specific permission, but no claim for compensation for such services will be admitted, although an assurance was given that fair payments would be made for any physical assets which are taken over from surface interests. This involves the risk that aircraft now in use, which are the only ones obtainable, might not be taken over as doubtless new types of aircraft will be available when the corporation is formed. It also rules out any suggestion of compensation for goodwill.

It is proposed that the Continental-United Kingdom Corporation shall have a monopoly of operating all regular services in its area and shall also have the right to engage in charter flying, but the latter phase of its activities will be open to private operators. All transport airports required for scheduled services will be acquired by the Ministry and pass into public ownership, and the Government in future will be responsible for their management and policing, as well as for radio, meteorological, and air transport control services.

The Minister emphasised that the decision to exclude surface



transport interests from having any financial participation in the corporation was reached in no spirit of opposition to those interests. On the contrary, the Government intended to develop civil aviation with the clear intention of integrating it with the land and sea transport systems. He recognised that the railway and shipping companies had given considerable study to civil aviation problems and he proposed to discuss with them forthwith how far co-operation was possible and how mutual interests of transport by land, sea, and air could be served best within the framework of the Government's policy.

There can be no doubt that the railways and shipping companies will co-operate to the greatest possible extent with the Minister but, having regard to the invaluable contribution which the railway companies have made to the development of civil aviation in Great Britain during the last few years, it is permissible to express considerable doubt as to the wisdom of preventing them from having any financial interest in the new corporation. Since 1940, they and their associated shipping companies have operated over 7,000,000 aircraft miles and carried 300,000 passengers and 7,000,000 lb. of urgent mail and cargo under war conditions with pre-war aircraft because of the non-availability of modern types, yet thanks to the efficiency of their operating and repair organisations they achieved a service regularity exceeding 95 per cent. It is difficult to believe that, in view of the many practical difficulties to be surmounted in connection with the establishment of Continental and internal services on a large scale, the nation can afford to discard such a wealth of actual operating experience merely for the sake of establishing the principle of public ownership.

It would be very regrettable if the proposed discussions between the Minister and the surface transport interests were to be confined to such matters as booking facilities, inter-availability of services for passengers and their luggage, connecting train services, etc. Important though these facilities would be to the new corporation, and presumably remunerative to railway companies, it would be unfortunate, to say the least, if much greater advantage were not taken of the railways' wealth of technical and operating experience in providing air transport.

It may be that the Minister has in mind asking the railways to participate in the management of the new corporation on terms to be agreed. Whether such a proposition would appeal to the railways in the absence of financial participation we are not in a position to say, but presumably they could not undertake such a task within the present scope of their statutory powers. Doubtless the intentions of the Minister will be clarified in the near future, as it is obvious that any lengthy continuance of the present uncertainty will have a detrimental effect on the development of internal air services in this country, particularly in connection with orders for modern types of aircraft.

### "It Can Now Be Revealed"

IN our issue of December 31, 1943, we reviewed a brochure, "British Railways in Peace and War," which disclosed, in part, the work of the railways during the war. For obvious reasons of security that publication had but limited scope, particularly as, at the time it was compiled, preparations for the Allied invasion of Europe were in being. The story of the part played by British railways before and during those preparations has now been told in the 64-page booklet, "It Can Now Be Revealed," briefly reviewed in our issue of last week.

The booklet gives an account of the movements, under the operating code word "Overlord," of troops and equipment, which culminated in the working of 9,679 special trains in the three weeks before D-Day. It will be remembered that only one week after D-Day there began London's second ordeal by air attack, and this added enormously to the heavy traffic problems of the railways. Details are given of the incidents occasioned by the 1,074 flying bombs which fell on, or close to, railway property. Among railway servants on duty between June 13 and August 31 last year, 54 died and 1,282 were injured. Supplies for the Normandy front, however, went through without interruption.

Much has been said recently of the decisive part played by the Allied bomber offensive against Germany. The railways began to take a hand in this offensive as early as the summer

of 1942, supplying the transport for aerodrome construction throughout the eastern counties of England. Great quantities of rubble were required for the foundations of runways and buildings. London provided the rubble—to the extent of 750,000 tons, moved by 1,700 trains. Another item was the transport from Bedfordshire to the airfield sites of 14,000,000 bricks for Air Ministry buildings. During July, 1943, the railways were called on to convey 3,000 tons of tarmac or slag, daily for 80 days, from the Midlands to some sixteen of the larger airfields in East Anglia. Details of railway requirements behind a "1,000 bomber strike" are given; briefly each strike necessitated the running of 28 trains of petrol wagons and eight train loads of bombs. British railways and their staffs played a full part in the great bomber offensive of 1944, during which the enemy received 927,000 tons of bombs.

Railway activities during the war were not confined to transport, and one chapter in the booklet is devoted to the great variety of armaments made in railway workshops, ranging from guns, ammunition, tanks and aircraft, to bombs, bridges, rafts, motor boats and superstructures for midge submarines. Tabulated and other statistics are given of the munition output of each of the main-line companies and of London Transport. The illustrations that accompany this chapter are of more than ordinary interest.

The concluding chapter of the booklet gives an outline of the railways' post-war plans, at the same time giving some existing difficulties. It is pointed out that much reconstruction will depend on adequate supplies of materials and on the rate of release of some 113,000 trained railwaymen from the Forces. Mention is made also of the wartime losses in locomotives and rolling stock that will have to be made good. No fewer than 216 engines have gone overseas, 40 have been sold to the Government, and eight were lost in air raids. More than 1,000 passenger coaches were requisitioned and 635 were lost in air raids. Enemy action also caused the total loss of 2,680 wagons with damage to 16,132 others. In addition, enemy action caused damage to 482 locomotives and 13,314 passenger coaches. It is unfortunate that publication of the booklet should have been delayed so long after the end of the war and the termination of censorship, for in these circumstances it is inevitable that much of the information it contains has already been made public.

### Central Argentine Railway Company

GROSS receipts of the Central Argentine Railway Company for the year to June 30, 1945, increased by £1,721,139 to £13,880,565, including £300,299 of accumulated balance on Family Subsidy Fund now released, of which £196,643 was held in suspense at June 30, 1944. Working expenses increased by £2,079,942 to £11,889,019. The increases were mainly due, respectively, to the increase of rates authorised from December 1, 1944, and to the accompanying increases in salaries and wages. The fuel bill was £2,703,424, an increase of £352,521 over 1943-44 and of £1,961,607 over 1939-40. Some operating figures are compared in the following table:—

	1943-44	1944-45
Passenger receipts ... ..	£3,076,656	£3,751,198
Public goods traffic (tonnes) ... ..	7,612,737	7,646,226
Public goods traffic receipts ... ..	£7,386,549	£7,904,007
Livestock receipts ... ..	£584,954	£587,838
Gross receipts ... ..	£12,159,426	£13,880,565
Working expenses ... ..	£9,809,077	£11,889,019
Net earnings ... ..	£2,350,349	£1,991,546
Operating ratio, per cent. ... ..	82.07	88.85

To the net revenue of £1,991,546 (£2,350,349) is added £139,254 (£18,172) from investments, etc., less general interest, and after deduction of £716,457 (£846,895) for exchange differences and £1,231,299 (£1,234,022) for debenture interest, etc., there remains a credit balance of £183,044 (£287,604), which reduces the balance at debit of net revenue account to £1,349,724. Contributions to provision for renewals were £614,568 (an increase of £11,199). The provision now stands at £4,330,883, showing a net increase of £426,516. Debenture interest affected by the scheme of arrangement dated November 21, 1940, has been provided for in the accounts, and that on the 4 per cent. debenture stock has been met on due dates. Interest from May 1, 1940, to December 31, 1940, on the 5 per cent. debenture stocks was paid during the year, and that for 1941 was paid on September 20 last. The scheme ends on December 31 next, and proposals for a renewal will be submitted, as the necessity for a moratorium still exists.

\* "It Can Now Be Revealed." Issued by the British Railways Press Office, 2, Palace Chambers, Bridge Street, Westminster, S.W.1. Obtainable from railway bookstalls. Price



### Standardisation of Australian Rolling Stock

TO obtain the maximum benefits from the gauge standardisation programme throughout the Australian Continent that has formed the subject of a number of recent articles in our columns, it will be necessary to standardise rolling stock, both in respect of major dimensions, and also in regard to the design of detail parts, especially those subject to wear or damage. Structure gauges representing inside dimensions of tunnels, bridges, platforms, and so forth, and maximum dimensions of rolling stock have been determined so that practically all vehicles will be able to move to almost any part of Australia where a 4 ft. 8½ in. gauge has been applied. Examples of the wearing parts needing standardisation are brake blocks, axle boxes and brasses, wheels and axles, springs, etc. If each system had its own design of these parts, a vehicle requiring a simple replacement when in a distant State might have to wait weeks for a new one, or it would be necessary for every system to carry stocks of all the types used in all the other States. In these circumstances, the prompt servicing of vehicles when in another State would be difficult, and the only solution is the adoption of standard parts for all systems. Much discussion has already taken place on the standardisation of rolling stock, and considerable progress has been achieved by agreement on the maximum dimensions of rolling stock as to height, length, and width, and spacing of bogies. One important matter of detail is the handbrake. In different States there are various forms of handbrake in operation, each familiar to its own shunters. With standardisation and the interchange of rolling stock, not more than two types of handbrake would have to be adopted. The standard brake will be a wheel type which can be operated from either side of the vehicle.

### Railways Since V-Day

ON October 30 *The Times* published an article in its City Notes which endeavoured to estimate the probable results of the pool of receipts and expenses of the controlled railway undertakings for the year 1945. The writer urged, incidentally, that the time had now arrived when there could no longer be any military necessity for keeping secret the volume of Government traffic, and, in these circumstances, the publication of railway traffic receipts—either weekly or monthly, should be resumed. We believe that the estimated traffic receipts are prepared weekly for the four main-line railways and the L.P.T.B., and their publication with the comparable figures for 1944 would be of considerable interest to the public generally.

Turning to the estimated results of the pooled revenue receipts and expenses and resultant net revenue of the controlled undertakings for the year ending December 30, 1945, the writer hazarded a guess that the receipts from passengers and freight would show only a slight difference from the total of £394,000,000 earned last year, on the grounds that, although since V-Day freight traffic has decreased, this will be almost entirely offset by an increase of passenger traffic. It is impossible to forecast the figures with any certainty because of the many uncertain factors, but there is little doubt that the receipts from passenger traffic will show an increase over 1944, particularly as the L.P.T.B. is now able to function under more normal conditions. So far as freight traffic is concerned, with the very heavy drop in the shipment of military stores through railway-owned docks, the general curtailment of war contracts and the very slow turn over to civilian production resulting from difficulties in the supply of labour and materials, we should have expected the decline in freight receipts to have outweighed considerably the expected increase in passenger-train receipts and that the total pooled revenue would show a greater decrease compared with 1944 than the £4.4 millions suggested.

We agree with the writer's view that in any case the expenditure for 1945 is likely to be at least £9 millions higher than the 1944 figure of £301 millions because of the increases in wage and coal costs, and the cost of the steady improvements which are being effected in passenger trains and other services. After allowing for other receipts and expenditure included in the pool (net), he estimates the final pool net revenue figure at £76 millions as compared with £90 millions for 1944. The deduction for other receipts and expenditure should be £3 millions and not £4 millions as stated by the writer and this would increase the final pool revenue to £77 millions—an

estimate which we venture to think events may prove to have been somewhat optimistic.

So far as the trend of pool revenue in 1946 is concerned, it will be recalled that the Railway Control Agreement provides that before control comes to an end, time will be given for the operation of any statutory machinery governing the level of railway charges. No steps have yet been taken in this direction, but it is of interest that on October 10 the Lord President of the Council (Mr. Herbert Morrison) stated in the House of Commons that the Minister of War Transport is examining the principles on which transport charges should be based.

### Birds in Hand

THERE were many who declared early in the war that we must never go back to the Britain of 1939. Signs of such a return are not obtrusive, and they should be happy men. Happy, that is, if they do not smoke cigarettes, are light on shoeleather, never wear out their clothes, and enjoy the comradeship of the queue. Only one aspect of the present austere scene is likely to cause them disquiet. There is evidence that the railway companies are turning their attention once more to the ease and comfort of their passengers.

A London evening newspaper has commented favourably on the restored restaurant-car services, not only in respect of the menus but also the courtesy and efficiency of the staff. The heading to the paragraph was "Praise for Railway!" the exclamation mark underlining the rarity of such acknowledgments. A few hours previously a daily paper published an article by a representative who had made a footplate trip on the G.W.R. Cornish Riviera Limited, moved to do so, it appeared, by reports that main-line expresses had been arriving in London at their scheduled times. This writer, too, was cordial, although we suspect an implied reproach in his remark that a speed of 102 m.p.h., claimed to have been attained on the G.W.R. in 1902, had never been exceeded "in this country, at least." If he meant that railway speed development had been static since the beginning of the century, we might retort that his own capacity for keeping up to date with facts over the past ten years is not displayed to advantage.

Restaurant cars and improving punctuality are not the only claims of a return to normal that the railways are able to make. New types of rolling stock for main-line traffic and service restoration on a scale that benefits all parts of the country can be pointed to with pride, particularly at a time when much commercial advertising must still be limited to promises for the future. These and other facilities have followed the end of hostilities with a speed that proves they were envisaged during the war years, and without the now popular preliminary fanfares about post-war planning. One railway poster announcing a new and numerous locomotive class is already able to call on the public to "look for them on the line," and some time before any motorcar manufacturer can once more say of his products, "count them on the road."

The most acid and determined critic could hardly maintain that the railways have not been engaged on war work in the past few years, and would moreover have to admit that even during the war new locomotive types were introduced that are likely to be somewhat less ephemeral than many products of the "utility" era. We are not unduly optimistic, on the grounds of two favourable items of newspaper comment, that railway achievements will always receive the acclamation due to them, or that criticism in future will at least be well-informed. New sticks are already in preparation to beat the railway back, two of which we suspect will be that the railways do not signal their trains by radar, and do not boil the water in their locomotives by atomic power.

**PISTON DEVELOPMENT IN GERMANY.**—Among the first British engineers to visit German manufacturing plants after the cessation of hostilities were Mr. C. F. Russell, General Manager & Director, and Mr. E. B. Graham, Technical Director, of Specialloid Limited. In the course of a 3,000 miles journey, 14 plants making pistons and piston rings were visited, and it was noted that cast pistons had been replaced by those of the pressed type for practically all German high duty engines. A summary of Mr. Russell's notes on these developments during the war is available to the trade from Specialloid Limited, of North Finchley, London, N.12.

## LETTERS TO THE EDITOR

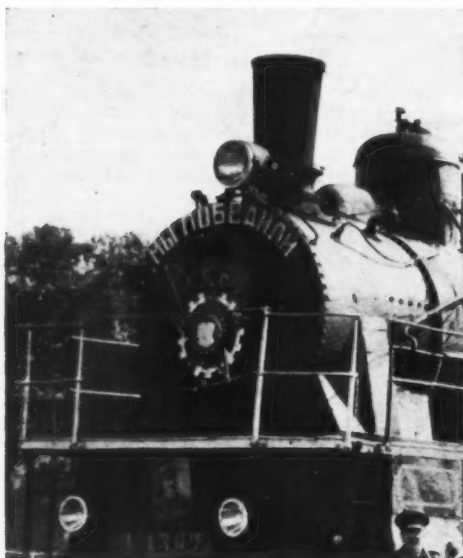
(The Editor is not responsible for the opinions of correspondents)

### Russian Locomotives in Berlin

Malta, October 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Regarding the article and illustrations in the October 26 issue of *The Railway Gazette* concerning "Russian Locomotives in Berlin" you state: "Our correspondent calls



attention to the name of the engine class in Russian characters on the smokebox under the upper headlamp." The inscription on the locomotive is not the name of the engine class, but a victory slogan, which literally translated means "We have conquered."

Yours, etc.,  
J.M.K.

### Compartment or Open Stock for Suburban Services

Whitegates, Rouncil Lane,  
Kenilworth, October 29

TO THE EDITOR OF "THE RAILWAY GAZETTE"

SIR,—I was amazed to read Mr. King's statement in his letter published in your issue of October 26, that it is more comfortable to stand in a crowded compartment than in an open coach, and can only say that I am in complete and utter disagreement with him and assume he has never experienced the two modes of travel himself. As for his further statement that it is not often necessary to hang on to anything at all, that is, I take it, because one is jammed between the legs of the seated passengers and can't move away.

As to the provision of racks he certainly makes a point there, but is there any reason why these cannot be provided in an open coach as well? If I remember correctly, the original open-type stock used by the L.M.S.R. on its electric services from Euston and Broad Street to Watford was provided with this facility and presumably, still is.

As for the difficulties about entering or leaving an open coach due to the tendency of passengers to congregate around the entrance, this is usually mitigated by the very much larger doors provided and I doubt if the consequent delay is any greater than that caused by passengers struggling out of a compartment which includes several standing.

My experience on the Metropolitan, where both types of stock are in operation, is that the compartment train is longer at the platform because of the necessity of ensuring that all doors are closed, and this is apt to cause bunching or unevenness which, with an intensive service, obviously is undesirable. This bunching tendency was also noticeable on the District Line when the through Southend-Ealing trains were composed of compartment stock, but was partly overcome by these trains omitting certain city stations.

Regarding air-operated doors, I am in agreement with Mr.

King. During the cold weather the tube trains operating out to Uxbridge and Hounslow, for instance, become ice boxes by the time the return journey is commenced, although a compromise is offered by the pneumatic door operated by the passenger.

It would be interesting to obtain the views of regular passengers on the Liverpool-Southport line where the new stock with air-operated doors works in conjunction with the old L.Y.R. sliding door type.

The adoption of compartment stock on the Southern Railway for electric services was a matter of expediency rather than convenience, as most of the suburban electric coaches were converted from existing steam stock.

Yours faithfully,

L. BUROW

### Ball Signals in America

Rodney Cottage, Bishops Lydeard,

Taunton, Somerset, October 29

TO THE EDITOR OF "THE RAILWAY GAZETTE"

SIR,—With reference to your paragraph on "Ball Signals in America" in your issue of October 26, it may be of interest to record that the term "Redball" was in use in American depots in this country to signify "top priority" road transport. Such vehicles were referred to as "redball trucks" and received all priority in loading, clearing, etc. They sometimes carried a red flashing electric light facing forwards.

The drivers of these vehicles were not supposed to let anything stand in the way of their loads being delivered on time, but their efforts in that direction were not always greatly appreciated by drivers of other heavy goods vehicles going in the opposite direction but without the sanctification of the "redball."

Yours faithfully,

PETER HASWELL

### "Another Aid to Russia Route"

Director-General of Railways, Baghdad,  
Iraqi State Railways.

October 1

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I write to call your attention to a mis-statement of facts appearing in your article, "Another Aid-to-Russia Route," at page 550 of your issue of June 1, 1945.

While I do not wish to damp the enthusiasm of the author of the article and without wishing in any way to minimise the assistance rendered by the Transportation Troops in Iraq towards the aid rendered to Russia, I would like to correct the impression given in your article that "the control of the railways in Iraq was taken over by a mixed Indian and Royal Engineer Organisation." This is totally incorrect, for the Civil Direction of the Iraqi State Railways remained the sole authority responsible for their management and operation throughout the war and at no time was its authority superseded by the Transportation Directorate—thanks to the insistence of the British Embassy.

The civil administration of the railway, however, was reinforced by some 2,500 officers and men of the Transportation Branch to enable it to carry the additional volume of military traffic which included the "Aid to Russia Stores."

I think it would be more just and accurate when referring to the aid that has been rendered to Russia and even the general war effort—if some reference were made to the important contribution that was made by the few British civilian railway officials with some 15,000 Iraqi nationals of the Iraqi State Railways, who were responsible for the operation of the line and without whom, although credit is claimed for it by the military authorities, the aid rendered to Russia would not have been possible.

Yours sincerely,

H. C. SMITH,  
Major General

### L.N.E.R. Locomotive Rebuilding

Peterhouse,

Cambridge, October 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. W. J. Reynolds does the L.N.E.R. an injustice by inferring that the recent rebuilding of one of the Gresley three-cylinder 2-6-0 locomotives with two cylinders is necessarily a retrograde step. Although one cannot deny that this rebuilding, which involved the provision of a new boiler, frames, cylinders, and motion, is more of a "renewal" than a "rebuild," yet it by no means follows that the step was not economically justifiable.

At the time of the introduction of this class, reduction of

locomotive running expenses had not become so essential as it is today, when costs of labour and materials show no signs of any check in their upward climb. I have found the opinion unanimous amongst members of the L.N.E.R. locomotive running department who have had experience of the several types of two-cylinder locomotives which Mr. Thompson has designed or rebuilt, that the maintenance of these locomotives is much easier (and therefore cheaper) than that of the corresponding three-cylinder machines. The elimination of the most inaccessible part of the motion is of great practical (and psychological) advantage to the shed staff, and it is well known that the derived motion used for the inside valves of the Gresley locomotives requires a standard of maintenance far in excess of that of the outside valve gears if it is to be kept in first-class condition. Even the advantage of lighter motion in the three-cylinder machines does not offset this, and the earlier of the new two-cylinder locomotives have now been in traffic for a long enough period to have displayed any susceptibility to wartime conditions of maintenance.

The possible advantages to be obtained from a three-cylinder machine are improved efficiency, reduced hammer blow, and reduced tendency to shouldering. Although figures have been published showing improved coal and water consumptions for three-cylinder locomotives, these have almost all referred to designs of 25 or more years ago, and are not therefore strictly applicable to modern practice. The efficiency of such classes as the L.M.S.R. two-cylinder class "5" 4-6-0s has been shown in published figures, and it is hard to believe that a three-cylinder version of this class would show any improvement.

The objection to the two-cylinder engine that it results in greater hammer blow and shouldering depends on the design of the engine considered. The Gresley 2-6-0 has a large proportion of the reciprocating parts balanced, whilst in the rebuild the proportion has been considerably reduced. I believe the respective figures are 60 per cent. and 30 per cent., in which case the hammer blow of the two-cylinder machine will be less than that of the three-cylinder. Likewise, the use of a new type of pony truck with lateral springing, instead of the Gresley double swing-link type, eliminates much of the shouldering which is characteristic of so many of the Gresley locomotives. In the light of these changes in design, the three-cylinder locomotive loses many of its advantages.

It is unfortunate that few reliable figures of locomotive efficiency and running costs are released by the Chief Mechanical Engineers of the British railways. I think that the L.N.E.R. could prove that its present policy of using three cylinders only in the largest locomotives is justifiable.

As a corollary to Mr. Reynolds' remarks, I might add that one of the Gresley three-cylinder 4-6-0s has recently returned to the Great Eastern Section rebuilt with two cylinders and a "B1" boiler. This engine has won immediate appreciation from the Running Department as being easier to maintain, of much

improved riding qualities, and at least the equal of the original locomotive in performance.

Yours faithfully,

ARTHUR F. COOK

## Facts about Port Working

London, N. October 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Recently you published a letter from "T. D." which drew attention to the dearth of news about the work of our railway troops overseas. The writer showed that America did things differently. A similar comparison can be drawn between our ignorance of the facts about wartime port working and the ample publicity given to dock results in the United States. We have to be content with odd scraps of information that appear in the Press from time to time about particular places. By the end of September the American people had complete figures for the war traffic handled at their ports from December, 1941, right through to August, 1945. The aggregates are striking:—7,306,000 troops, 126,860,000 tons of cargo. New York alone shipped 3,184,000 troops, 37,800,000 tons of cargo, about two-thirds more than the business done at San Francisco.

Why cannot the facts about our own ports be published before interest in our wartime performance has waned? They would make a fine story if it is not spoiled by the lapse of a dreary interval of time.

Yours faithfully,

LOGICISTALIST

## Coach Design

4, Conaways Close, Ewell,

Surrey. October 18

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Now that the public is invited to air its views on coach design may a layman suggest that there is room for improvement, from the passenger's point of view, in the position of lavatory compartments?

Wartime conditions of overcrowding have made it apparent that the extreme end of the coach is not the most accessible spot for this amenity, particularly in the case of a coach with end doors only. The propensity of standing passengers for keeping as near as possible to the door, sinful as it is in the eye of the railway official, is a natural one in a much overcrowded train, as anxiety to get on the train is succeeded by anxiety to leave it as soon as one's destination is reached.

The ideal arrangement from the passenger's point of view, would be to place toilet accommodation at equi-spaced intervals, each cubicle serving, say, two travelling compartments on each side. Incidentally, this practice would make washing one's hands at 70 m.p.h. less of a gymnastic feat than it is at present.

Yours faithfully,

KENNETH R. ALBROW

## Publications Received

**Railroads.** Illustrations by G. P. Micklewright. London: A. A. Quin Limited, 28, New Bridge Street, E.C.4. 9½ in. × 7½ in. 27 pp. Stiff paper covers. Price 4s. 6d.—This well-produced book consists solely of pictures, reproduced in full colours. The principal expresses of the four British main-line companies are illustrated, with a number of famous trains in Canada, France, Belgium, the United States and Soviet Russia. There are 23 full-page pictures, and one double page, each with a short description of the subject: a list of contents is also included.

**Railway Block Telegraph Regulations.** By Jno. Aitken. 206 pages. 4½ in. × 7 in. Illustrated. Published by S.B.A., "Glenesk," Northbank Avenue, Kirkintilloch, near Glasgow. Price 3s. 6d.—The author, whose other works on rules, regulations, signalling, and other aspects of traffic working are well known, has been accustomed to give lectures to various mutual improvement classes throughout the country on block telegraph working and related subjects. He has prepared the present useful volume, which would have comprised a complete set of 20 lectures had not the paper shortage and other difficulties obliged him to restrict the number of pages. As it is, the book will be very welcome to

those entering or engaged in the operating departments of railways, enabling them to study, rule by rule, the principles under which block working is conducted and, from a reading of the comments made thereon by the author, profit by his long and varied experience, not only as a railway servant but as a lecturer, and the questions set enable the reader to test his understanding of the subject stage by stage. The most valuable parts of the book are those dealing with the procedure to be followed when emergencies arise. We hope that in a future edition the author will be free to make his own part in the work more comprehensive, as it is this which the student needs most.

**Jågfarjån "Malmöhus" (The Train Ferry "Malmöhus").** Illustrated folder issued by the Swedish State Railways.—This well-produced folder gives a brief but informative description of the new motor train ferry for the Copenhagen-Malmö service, named "Malmöhus," after an old fortress. It is 50 years since this service was opened by the paddle-wheel ferry vessel *Kjöbenhavn* and in the first 12 months 2,600 passengers and 20,000 tonnes of freight were carried. In the year before the present war over 250,000 passengers used this route. The new vessel, built by Kockums, can convey 25,000 freight wagons annually and is of 3,000 tonnes displacement, 309 ft. long

by 52½ ft. beam; passenger capacity is 1,800. The propelling machinery consists of two 8-cylinder diesel engines of 2,900 h.p. and at 33 ft. draught a speed of 15 knots is obtained; the run is accomplished in 1 hr. 20 min. There are three 6-cylinder 380 h.p. diesel engines driving generators for lighting and all auxiliary services. The hull is all-welded and there are 9 watertight compartments. The vessel has both stern and bow rudders. This vessel was described and illustrated in our November 2 issue.

**Tools and Attachments for Single Spindle Automatic Screw Machines.** Burton Griffiths & Co. Ltd. and B.S.A. Tools Limited, Birmingham. 11 in. × 8½ in., brochure. 44 pp., with 86 data sheets, in stiff card folder. Price 10s. 6d.—This catalogue describes, with half-tone illustrations and full-scale line drawings, the tools and attachments for use with B.S.A. single-spindle automatic screw machines. The drawings are to full scale and are in loose-leaf form, so that they can be removed from the folder and used by draughtsmen and tooling engineers for layout purposes. The equipment described, in many instances, can be used on other makes of similar machines that use a system of front and rear camshafts with disc cams. The catalogue, therefore, should prove of interest to a wide range of manufacturers.



## The Scrap Heap

### COUPONS FOR RAIL CRASH HELPERS

People who helped victims of the Bourne End rail crash by giving them blankets, which are on coupons, will have them replaced by the Board of Trade. A docket for coupons can be obtained by application to the Board.—From "The Evening Standard."

### RAILWAY QUESTIONS AND ANSWERS

**Statement:** Under State-ownership there would be complete co-ordination of transport. For example, local bus and train services would be inter-related; local train services in the Provinces would be related to main-line arrival times.

**Answer:** There is no evidence to support this view. Where specific instances of lack of co-ordination between local train and related transport services are brought to the attention of the railways, attempts always are made to improve conditions in the interest of the travelling public, and there are many examples of local bus services radiating from a station yard which are linked up with train services. But it should be remembered that the density of rail traffic on these small islands is so great that alterations in the timing of one train may affect the timing of 50 other trains in an area of a hundred square miles and to effect co-ordination in one area might bring about lack of co-ordination in twenty other areas.—From "Answers to Questions and Statements, issued by the British Main-Line Railway Companies, 22, Palace Chambers, London, S.W.1."

### 100 YEARS AGO

From THE RAILWAY TIMES, Nov. 8, 1845

**GRAND JUNCTION RAILWAY.**—This Company is prepared to receive tenders for loans for a term of five years, in sums of not less than £1000, at three and a half per cent. per annum. Communications to be addressed to the Secretary at the Company's Office, in Lime-street. HENRY BOOTH, Secretary. Liverpool, 10th October, 1845.

**RAILROADS IN THE ISLE OF WIGHT.**—That the public may not be misled by the various statements that have appeared in the public papers, and in the prospectus of the Isle of Wight Railways, I am desired to state, that at a general meeting of the landowners and ratepayers of the island, held at Newport on the 26th of June last, resolutions were carried declaring the opinion of the meeting to be adverse to the introduction of railways into the island, and that a Committee of gentlemen was at the same time appointed to watch the proceedings of the railway projectors. And I am further directed by this Committee to state, that not only will the scheme be opposed by the most influential landed proprietors, through whose estates the railways would pass, but that it is also intended to offer a vigorous public opposition to the project in Parliament, should a Bill be sought for.

C. W. ESTCOURT.

Hon. Sec. esty to the Committee. P.S. Another scheme having been preliminarily announced as the Direct Ryde and Ventnor Railway, I am instructed by the Committee to state, that this latter will meet with the same decided opposition as the former project.



Fogged

### QUEUES

None of us likes rations and none of us likes queues. While on the subject of queues, I cannot help telling your Lordships of a short experience which occurred to me when I came to Paddington Station in the company of a noble Lord who does not sit on this side of the House.

On reaching Paddington Station we found a queue at the arrival platform. The noble Lord became somewhat irritable and said: "I cannot stand these confounded queues. Let us go to the departure platform where there are no queues." We went to the departure platform and there we spent some time scurrying backwards and forwards trying to obtain a taxi. Finally, the noble Lord went up to a policeman—he was a police inspector but the noble Lord did not notice that—and said "Constable, why on earth can't you organise a queue on this side of the station?"—Lord Pakenham in a speech delivered to the House of Lords during the debate on the Supplies & Services (Transitional Powers) Bill.

### FOUR-AND-A-HALF DAYS IN THE TRAIN

#### —THE COMFORT OF CANADIAN TRAVEL

"For this transcontinental jaunt I had acquired the appurtenances and privileges of Upper 6 in Car 62. This is part of a 'Standard Sleeping Car.' By day the car contains a series of small bed-sitting rooms.

A few deft movements by the porter and it becomes a series of two-berth bedrooms. Morning comes and . . . the porter restores the bed-sitting rooms; the lower berth becomes two wide seats and the upper, with the bedding for both, becomes a concave ceiling of highly polished wood. There seemed to be a tacit agreement that the lower berth plutocrat should have his choice of day-time seats. He usually took the one facing the engine. The one I like. . . Smoking is not allowed in the sleeping car. A civilised rule in my view. The porter was an ex-sergeant-major of the Polish Army, who was lenient about the daily sleeping-car reconversion if one wanted to sleep late.

Meals in the dining cars were exactly what English diners were like when we had them, though I am reluctantly obliged to doubt if English railway food was ever so good, so lavish or so well cooked."—Extracts from an article in "The Yorkshire Post" by Mr. C. F. Dunn.



"Is that the bit you were trying to read?"

[Reproduced by permission of "The Tatler & Bystander"]

Of 38,433 L.M.S.R. men and women in the services during the war, 307 have won decorations and six have received a bar to their award. In addition, 63 L.M.S.R. men have been decorated for gallantry on the home front, and 48 were killed, due to enemy action, whilst on L.M.S.R. duties.

### RAILS AND FLOWERS

One aspect of the ever increasing love of the countryside among all kinds of people is an intense interest in wildflowers. One wonders, however, if many country-lovers have realised the debt which wildflowers owe to railways. Where, for instance, does one see more attractive and undisturbed displays of these beautiful things than in a country or even suburban railway cutting? Yet the phenomenon was noted years ago by that greatest of English writers on natural history, Richard Jefferies, who died in 1887. This is what he says of a railway-side scene coloured with wildflowers: "Seen for a moment in swiftly passing, they border the line like a continuous garden. Driven from the fields by plough and hoe, cast out from the pleasure-grounds of modern houses, pulled up and hurled over the wall to wither as accursed things, they have taken refuge on the embankment and the cutting. There they can flourish and ripen their seeds, little harassed even by the scythe and never by grazing cattle. So it happens that, extremes meeting, the wild flower, with its old-world associations, often grows most freely within a few feet of the wheels of the locomotive."

### TAILPIECE

(Measurements of 3,867 seated passengers were taken to settle standard carriage seat dimensions in the U.S.A.)

In this unsafe, uncertain world This certain truth we see— The seat that's made for Mr. A Will not fit Mrs. B.

The sylphlike bulk of Madame C Will comfortably go In space too small for Colonel D— Dimensions differ so.

So many varied lengths and breadths, So many shapes are seen, If you'd accommodate them all You have to strike a mean.

E. C.

## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### INDIA

#### B.B.C.I.R. and Flood Damage

The cyclone which passed over Bombay towards the end of September moved north, along the area served by the Bombay, Baroda & Central India Railway. The accompanying rainfall was so heavy that Baroda and Godhra recorded between 18 and 20 in. in 24 hours. On September 22 the first breach of the railway was reported between Bilimora and Amalsad, and on September 24 the area between Broach and Baroda was hit by a severe cyclone.

The breaches between Bilimora and Baroda occurred at intervals extending over a total distance of 100 miles. The longest breach was 5 miles. The breach between Maroli and Bachin was particularly bad, as the earth below the railway line was scoured to a depth of 42 ft. Nearly half a million cubic feet of earthwork was involved in filling in this breach.

Three large bridges between Kim and Koaba were damaged badly; this was the worst affected area.

The problem of securing a large number of labourers and of sending material to the affected areas was a difficult one for the railway authorities. Labour was drafted from Bombay, and sent as far north as Muttra. Men and materials were rushed to the northern and southern zones, and later a large number of men was sent to the central zone. The railway had a difficult problem in housing and feeding these men and providing them with medical aid. Work went on day and night.

A restricted service was restored 14 days after the cyclone had passed.

### SOUTH AFRICA

#### Post-War Development

Speaking recently before the Kimberley City Council at a farewell luncheon, Brigadier C. M. Hoffe, the retiring General Manager, said that the South African Railways & Harbours Administration had in hand a post-war development programme which ultimately would entail the expenditure of nearly £60,000,000.

Brigadier Hoffe said that the railways had passed through the most interesting and instructive phase of its history during the war, and was now entering a new phase with a managerial administration designed to meet the exacting demands of the post-war years. Saying that he had no fears for the future, Brigadier Hoffe declared that the railway service would be patronised in direct relation to the type of service it offered. He said that the Administration was now devoting all its attention to greater comfort, higher speeds, and ever more efficient operation. He thought that the railways would give the public the type of service it desired and would support.

The railways had emerged from the war with an enhanced reputation and with a record of public service second to none. More than 5,000 military passenger trains, and 1,000 special military goods trains were operated, in addition to a full schedule of ordinary services. In 1941 the railways transported 39,000,000 tons of goods; in 1943, 41,000,000 tons; passenger journeys increased from 126,000,000 to 219,000,000; livestock earnings rose from £900,000 to £1,000,000, and the staff employed increased from 123,800 to 149,800.

The year 1942 was important in the history of the South African Railways. In

this year Parliament approved the plan to build two railway hotels, one at Cape Town and one at Pretoria. An economic bureau was established at Headquarters, and the new graving dock at Table Bay was approved. The weekly traffic earnings for the first time exceeded £1,000,000. In 1943 a Ports' Allocation Executive was appointed and the road motor transport service broke a record by carrying 10,000,000 passengers during the year. In the same year the Duncan Dock at Cape Town was opened, and all transport was combined under the direction of one Minister with the formation of the Ministry of Transport.

In December, 1944, the South African Airways resumed operations on a restricted basis, and in 1945 the framework of the air services was effectively laid at the Southern Africa Air Transport Conference at Cape Town.

Over 4,000 men had been taken on from the army and there were another 4,000 to come. Most of these ex-soldiers would have to undergo a period of training before they could take new jobs or qualify for promotion, and the men were co-operating fully in this respect.

### KENYA & UGANDA

#### Port of Mombasa

The Port of Mombasa, which includes the main deep-water harbour of Kilindini ("the Place of Deep Waters") and Mombasa Old Port, which accommodates the extensive Indian Ocean dhow trade, played an important part in the war. It serves the territories of Kenya, Uganda and some parts of Tanganyika and was the main operational port for the Abyssinian and Madagascar campaigns. In addition it was the main port for the Eastern Fleet for about one year of the war. It was also an important convoy port.

Before the war Kilindini Harbour was served by a deep-water general cargo quay, 2,872 ft. in length with five berths for ocean-going vessels, maximum draught of 32 ft. During the war two additional berths were added and the deep-water quay is now 4,089 ft. in length. There is a conveyor-served berth at Magadi (chiefly for the export of soda ash) with a depth alongside of 27 ft. at L.W.O.S.T., there is a special dock at Shimanzi for the discharge of bulk oil and a 300-ft. jetty for the handling of cased oils. Accommodation for coal is provided at Mbaraki off which discharged colliers are moored.

The deep-water general-cargo quay is served by 26 electric level-luffing cranes and has seven transit sheds, three of which are double-storeyed quay sheds, while the stacking ground has nine cranes, of which three are 5-ton mobile machines.

The extent of the increase in port activities during the war can be judged from a comparison between the 1,000,000 tons of cargo (excluding bulk oils) handled in 1939 and the 1,700,000 tons handled yearly between 1941 and 1944. The increased traffic had to be dealt with under wartime convoy conditions and naturally presented more complicated problems than did the traffic of pre-war years. The necessity, too, to accumulate large export cargoes of essential raw materials from the interior at the port and the consequent transit working of these cargoes from the sheds and outlying godowns to ships greatly increased the difficulties of handling wartime traffic.

In 1944 famine conditions throughout East Africa made necessary the heavy im-

portation of foodstuffs which increased the strain on storage and on railway operations at the port. Throughout the whole period movement through the port remained comparatively fluid, and in spite of depleted staff, all cargoes were efficiently dealt with, and the turn-round of ships compared favourably with the clearance at other ports.

#### Transport Improvements

A programme of capital improvements for rehabilitating and modernising the transport system involving a loan expenditure of nearly £2,000,000 spread over the next five years is being submitted to the Kenya & Uganda Railway Advisory Council and the Harbour Advisory Board for consideration. The proposals cover African staff housing, rolling stock, track improvements, and marine equipment.

#### U.S.A.-Built Stock Defects

Serious defects have developed in the wheels of U.S.A.-built stock delivered during the war to the Kenya & Uganda Railways, and the vehicles are being withdrawn from service until new wheels can be provided and fitted; as a result the railways will have less equipment to deal with the forthcoming crop seasons, which are expected to make heavy demands on the transport system, than has been available during the past few years.

### UNITED STATES

#### New "Empire Builder" Streamliners

The important project of a fast streamline passenger service between Chicago and the cities of the north-west Pacific coast is now taking shape. Orders have been placed by the Great Northern Railway and Chicago, Burlington & Quincy Railroad for five 12-coach trains (four for the G.N.R. and one for the Burlington, proportionately to the mileages of the route operated by the two companies), with diesel-electric haulage, which will take over the working of the present "Empire Builder" express between Seattle and Chicago; between Chicago and St. Paul the running is over Burlington metals and between St. Paul and Seattle over those of the G.N.R. It is hoped to bring the time between Chicago and Seattle down from the present 57-58½ hr. to 45 hr. for the 2,196 miles; through coaches will operate also between Chicago and Portland.

The main importance of this development lies in the fact that this will be the first daily streamliner to link up with the Pacific coast; the existing "City" trains jointly worked by the Chicago and North Western, Union Pacific, and Southern Pacific Railroads, and the "Super-Chief" and "El Capitan" of the Santa Fe, each run twice weekly from Chicago to Los Angeles and San Francisco, while the service to and from Portland is at six-day intervals. The new service also will meet complaints from Seattle that the three cities last-mentioned have received preferential treatment in their rail communications with the Middle West.

Each "Empire Builder" train will incorporate baggage-mail van, four chair coaches, grill car, dining car, four sleeping cars, and an observation lounge car.

#### End of Mexican Labour on U.S. Railways

It is expected that by November 20 all Mexican railway workers recruited as a wartime measure will have returned to their own country. From May 13 all contracts have been restricted to 90-day periods, and from August 18 all recruiting has been suspended. Since the latter date, the return to Mexico of the 67,000 Mexican

nationals so recruited has been expedited at far as possible.

## BRAZIL

### San Paulo Railway Electrification

Subsequent to the Decree Law signed recently, authorising the San Paulo Railway to electrify its line between San Paulo and Jundiahy (briefly referred to in *The Railway Gazette* of April 20), additional clauses have been added to the contract which regulates this railway's services, whereby the principal conditions under which the electrification will be carried out are laid down. By the terms of these clauses the San Paulo Railway is obliged to submit for the approval of the Federal Government within a year plans and respective estimates for the electrification of its line between San Paulo and Jundiahy. Plans must include all buildings and installations, any technical improvements necessary to permanent way, re-adaptation and re-equipment of workshops and stores, and acquisition of motive power and rolling stock.

The work of electrification must be concluded, and the line opened for traffic, within two years of the date of approval of the plans mentioned above.

### Surcharge to Meet Cost

To meet the cost of electrification the San Paulo Railway is authorised to make use during a period of five years of a surcharge of 10 per cent. on all tariffs in force on its line between Santos and Jundiahy. The product of this surcharge will be deposited in the Bank of Brazil up to the last day of the second month subsequent to collection, and all interest accruing therefrom will be added to the product. The San Paulo Railway will be allowed to take loans guaranteed by the above product, subject, however, to the terms being approved by the Ministry of Transport & Public Works.

At the end of five years the surcharge of 10 per cent. will cease automatically unless, before that time, it is found that the amount collected has not been sufficient to cover costs and redemption of loans, and the railway requests an extension for a period considered sufficient to produce the necessary amount. If the amount produced in five years exceeds expenses, the surplus will be allotted to other electrification schemes as judged advisable by the National Department of Railways.

## ITALY

### Electrification in Northern Italy

With a view to easing railway communications between Savona and Genoa and the Simplon route, which constitute the shortest connection between any maritime port and Switzerland, a scheme is now being evolved in Switzerland for the electrification of the only section on the route which is still steam-worked, between Alessandria and Domodossola, via Mortara, Novara and Arona, a distance of 98½ miles. There is a divergence of views concerning the system to be adopted. Although the system of the Italian State Railways in northern Italy generally is three-phase, 16½ cycles at 3,700 volts, the Swiss would prefer, for the above line, the single-phase, 16½ cycles, 15,000-volt system adopted by the Swiss Federal Railways. This would allow Swiss locomotives to be worked as far south in Italian territory as Alessandria, only 65½ miles to the north of Savona and 47 miles to the north of Genoa. Savona has always been the main port through which overseas coal for Switzerland has been imported. The scheme is said to be

viewed with favour by both Allied and Italian circles. At present, there is only one line in Italy for which the Swiss system has been adopted. This is the 11½-mile extension of the Simplon tunnel line on Italian territory, between Iselle, at the southern exit of the tunnel, and Domo-dossola. This extension, however, is owned and worked by the Swiss Federal Railways.

### Increase in Goods Rates

Railway goods rates in Italy were substantially increased on September 4. To give an indication of the rise brought about in the cost of transport of vital commodities, the following examples are given in respect of the Genoa-Chiasso line.

	Rate per metric ton before September 4	Rate per metric ton after September 4
	Swiss francs	Swiss francs
Wheat	9.95	23.20
Coffee	26.55	39.44
Sugar	19.28	32.48
Hard coal	8.81	18.56

The above rates per metric ton, in respect of wheat, coffee and sugar, are applicable to 10-ton loads; the hard coal rates apply to 15-ton loads.

## DENMARK

### Diesel-Electric Streamliners Restored

From October 12, 1945, the Danish State Railways restored to service their fleet of diesel-electric *lyntog*, or "lightning trains," under the names which they carried up to the occupation of Denmark but now with an extended radius of action. In addition to the *hurtigtog* ticket which is necessary for all express-train travel, passengers must be in possession of seat tickets when using these services, which are operated by four-car streamline trains of modern design, with refreshment facilities.

On the principal service between Copenhagen and North Jutland, the "Kronjyden" starts at 7.30 a.m. and the "Nordjyden" at 5.20 p.m., for Aarhus, Randers, Hobro and Aalborg only. The morning train runs non-stop over the 125½ miles between Nyborg and Aarhus in 142 min., and makes the entire journey of 300 miles in 7 hr. 3 min. but this includes the 70-min. ferry crossing of the Great Belt from Korsør to Nyborg; the Little Belt is crossed by the great bridge which was completed shortly before the war and is evidently undamaged. The "Nordjyden" evening train calls additionally at Fredericia and reaches Aalborg at 12.29 midnight. To Copenhagen the "Nordjyden" leaves Aalborg at 6.5 a.m., and the "Kronjyden" at 4.30 p.m., reaching Copenhagen at 1.6 p.m. and 11.26 p.m., respectively.

### "Ostjyden" and "Midjyden" Trains

Intermediate stations between Copenhagen and Aarhus are served by the "Ostjyden" and "Midjyden" trains, which leave Copenhagen at 6.45 a.m. and 5.7 p.m.; the "Midjyden" train reaches Korsør just ahead of the "Nordjyden" and crosses the Great Belt in the same train-ferry, proceeding from Nyborg after the faster train has left. Both the "Ostjyden" and "Midjyden" continue from Aarhus to Langaa, Viborg, and Struer, the entire journey of 327 miles, with 13 and 15 intermediate stops, taking 7 hr. 39 min. and 7 hr. 58 min., respectively. In the east-bound direction, the "Midjyden" leaves Struer at 5.25 a.m., and the "Ostjyden" at 3.15 p.m., reaching Copenhagen at 1.21 p.m. and 10.59 p.m. The "Midjyden" and the "Nordjyden" cross the Great Belt from Nyborg to Korsør on the same train-ferry.

### "Vesterhavet" Service

The remaining streamline train is the "Vesterhavet," formerly running between Copenhagen and the port of Esbjerg, and

now extended to serve Varde, Stern, and Ringkøbing. This streamline train leaves Copenhagen at 7.17 a.m., crosses the Great Belt with the "Kronjyden," and reaches Esbjerg at 12.48 p.m., and Ringkøbing at 1.59 p.m. It returns at 4.55 p.m. from Ringkøbing and 6.10 p.m. from Esbjerg, arriving in Copenhagen at 11.33 p.m.; the journey of 264½ miles thus takes 6 hr. 42 min. westbound and 6 hr. 38 min. eastbound. The fastest start-to-stop runs on these services are scheduled at between 54 and 55 m.p.h., as compared with a little over 60 m.p.h. before the war. Overall times between Copenhagen and Aarhus have been increased by about half-an-hour over those operating in 1939, and the times over longer distances in proportion.

## HOLLAND

### Removal of Locomotives

As soon as the Allies were advancing successfully in the provinces of North Brabant and Limburg and the Germans became aware that they were losing their grip on the country, they began to send increasing numbers of Dutch locomotives and rolling stock to Germany and to dismantle the overhead systems of electrified track. During the period of the Allied bombing of German railway traffic in Holland, some 200 Dutch railwaymen lost their lives.

Traffic has been resumed, although on a very restricted scale, on a few lines, mainly in the south and east of the country, as reported briefly in *The Railway Gazette* of July 20. The most important line of the whole system, the electrified Amsterdam-The Hague-Rotterdam line, will be restored to traffic shortly, with a limited number of trains a day. A number of destroyed railway bridges are to be rebuilt temporarily before the end of 1945 to restore communications between the various zones into which the country is divided by its large rivers.

Permanent repairs and reconstructions are impossible for the time being because of the shortage of materials and the impelling need of re-establishing, at the earliest possible moment, a limited number of the more important connections. The position of road communication is similar to that of the railways, although it has been possible to re-open through routes by the use of Bailey bridges supplied by Britain: their length is said to total more than six miles. Some 10,000 metric tons of bridge-building materials are ready in British ports for despatch to Holland. The Dutch have ordered more than 31,000 metric tons of steel for bridge building from the British steel industry. Dutch railway experts hold the view that full restoration of the Dutch railway system will take at least two years.

## CEYLON

### Improved Train Service

An improvement to be effected shortly in the train service in Ceylon, will enable passengers to make the trip from Colombo to Jaffna by day. At present, passengers arriving by the Talaimannar train from India to towns in the Jaffna Peninsula have to endure a night-long vigil at Madawachchi as there is no train to convey them to Jaffna until the morning of the following day. This is now to be remedied. The prospect of expediting the train service between Colombo and Jaffna, and reducing the inconvenience of the tedious journey of thirteen hours, has advanced another stage by the strengthening of the track from Madawachchi to Jaffna.



## Standard Carriage Seat Dimensions in the U.S.A.

*After research, in which measurements were taken of 3,867 seated passengers, standard dimensions have been agreed between the railways and the principal seat manufacturers*

FOR some time the Mechanical Division of the Association of American Railroads has had in session a sub-committee on standard dimensions for carriage seats, which has just presented its report. This was prepared for the 1945 annual meeting of the Mechanical Division, but in consequence of travel restrictions, no actual meeting was held, and the various committee reports were printed in the *Railway Mechanical Engineer*, to which we are indebted for the drawing of the standard type of seat agreed on, and the particulars that follow. The aim of the sub-committee was to reach a uniformity in seat design which would give the maximum of comfort to the average passenger. Contact was established with the principal American manufacturers of railway carriage seats, to ensure that the sub-committee's findings would be generally acceptable, on the understanding that, within the limits of the agreed standard dimensions, each manufacturer should be free to develop his own specialties in design and appearance. All these manufacturers have agreed that the principal seat dimensions standardised by the sub-committee are satisfactory to them, and that they are ready to co-operate.

The starting-point of the investigation was a lengthy series of experiments conducted in Boston and Chicago, with the help of a special measuring chair designed and built by the Heywood-Wakefield Company, and under the direction of Dr. E. A. Hooton, Head of the Harvard University Department of Anthropology, which specialises in accurate measurement of the human anatomy. This chair was set up in the Boston North terminal station of the Boston & Maine Railroad, and in the Chicago station of the Chicago & North Western Railway, at both of which passengers were invited to sit in the chair so that their reactions to various angles of seating and seat-back, and heights from floor level, might be measured. Measurements were taken from a total of 3,867 individuals, who may be considered as a thoroughly representative group of persons normally using the trains.

### DIMENSIONS RECOMMENDED AS FUTURE STANDARD FOR COACH SEATS IN THE UNITED STATES

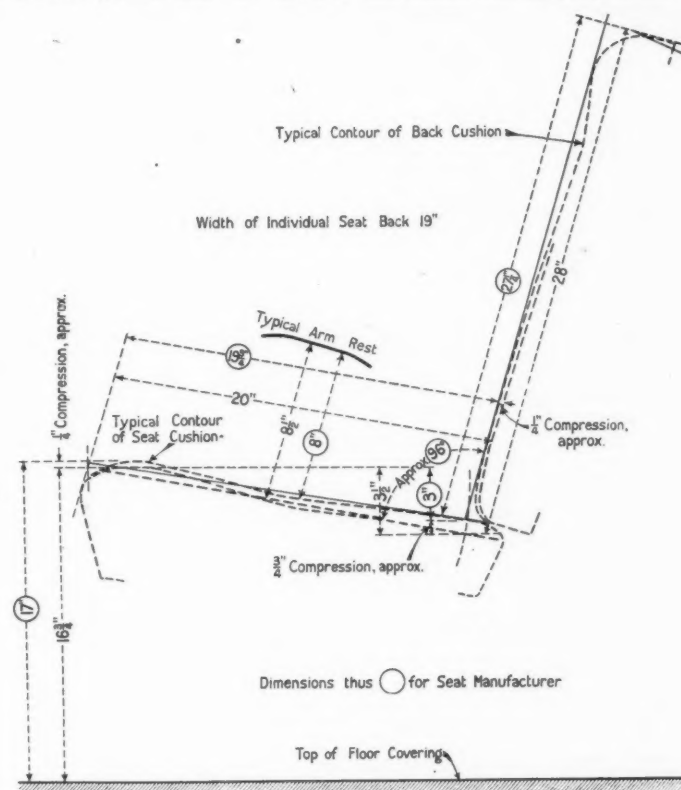
	Dimension resulting from survey	Correction for cushion compression	Dimension recommended for seat designs	Range of 33 seat designs submitted
Height of seat above floor at front edge ...	16½	½	17	16-19
Seat length from front to back ...	20	½	19½	18-21
Seat slope (greater height at front than at back) ...	3½	½	3	3-3½
Seat back height ...	28	½	27½	22½-28½
Width of seat and back ...	19	—	19	17½-19½
Height of arm-rest from top of seat ...	8½	½	8	5-9½ deg.
Angle of seat to vertical ...	deg. 96	—	deg. 96	96-110

The methods used in measuring were as follows. First, the seat was raised until the

occupant's feet were lifted from the floor and the lower legs were hanging straight down. A seat length rod (measuring length as from the front to the back of the seat) was then pulled out until it was in contact with the uppermost part of the lower leg behind the knee. Then the seat was lowered slowly until the feet rested firmly on the floor, but care was taken to see that it was not lowered to the point at which the popliteal area (the lower part of the upper leg behind the knee) ceased to be in contact with the surface of the seat. Next, the individual was asked to place the forearm on and parallel with the armrest.

between head and neck, was a crutch-like end, into which the nape of the neck fitted. This is actually the region of the first and second cervical vertebrae, and is located without difficulty. For this measurement the sitter was asked to sit erect. Next, the breadth of the shoulders was measured by bringing together the two arms of a shoulder-breadth rod until they were in contact with the deltoid muscles, which are the area of maximum lateral expansion. When necessary, the subjects were asked to hold their arms against their bodies to enable a correct measurement to be made.

The final measurements were those of weight and height. The average weight of all subjects was found to be 152.8 lb. (10 st. 12½ lb.); the average height of males was 5 ft. 9 in. and of females 5 ft. 5 in. Care was taken to see that the number of subjects measured in each age group was roughly equal, that the numbers of males and females were about equal, and that all



Carriage seat dimensions recommended for use in the United States

which was raised or lowered until the shoulders were level, and the angle between the arm and the forearm was about 90 deg. Most of those whose measurements were taken described this position as comfortable. For measuring the hip breadth of sitting occupants, a hip breadth rod was provided, with two calibrated arms, which were brought together until they touched the maximum expanded spread of the upper thighs. Enough pressure was exerted to compress loose clothing, and due account was taken of objects in side pockets which increased the width.

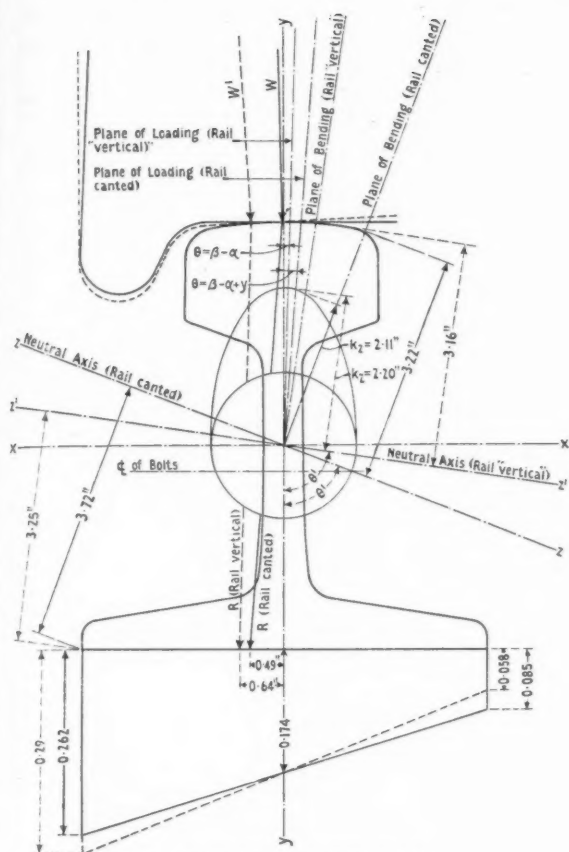
For accurate measurement of the back height of the sitter, a back-height rod was pulled up. At right-angles to this rod, and extending forwards towards the back of the subject's head at the point of junction

economic and social levels of society were adequately represented. Other information acquired included birthplace (so that the measurements of foreign-born subjects could be compared with those of American-born citizens), and details of footwear, the shape of which influences the angle of repose of the leg and the height of the foot from the floor.

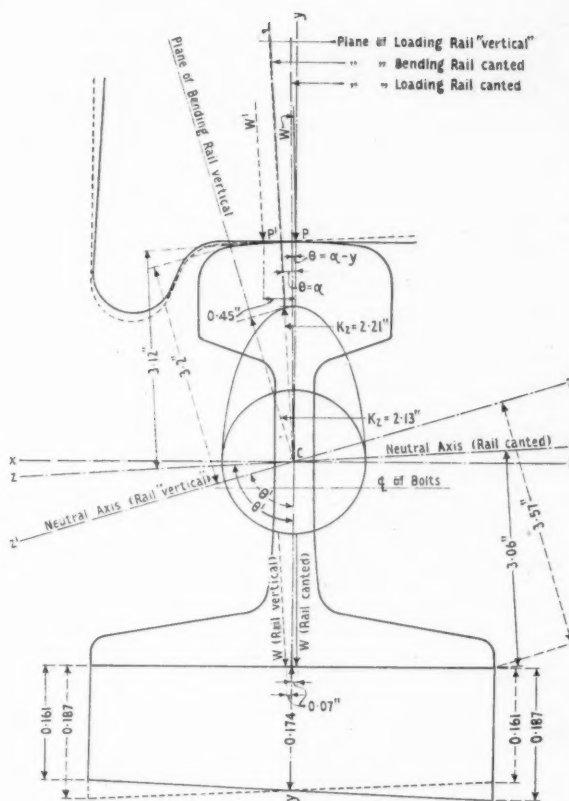
In calculating the standard dimensions from the measurements taken, the main difficulty was that of catering for tall and short travellers. One of the most important measurements is the height of seat above the floor. To short people a seat of too great height is more uncomfortable than a low seat to tall people, for the latter can stretch their legs further forward, at

(Continued on page 482)





C-CURVE, INNER RAIL



D-CURVE, INNER RAIL  
VEHICLE AT REST OR MOVING DEAD SLOW

compressive stress at the centre P of the running surface.

Since the width of the foot is  $5\frac{1}{2}$  in., the average pressure over the base is 0.174 units per sq. in. for unit wheel load per unit length of rail ( $W = 1$ ). Maximum and minimum unit pressures for both vertical and canted rail are shown as calculated by means of the usual formula:

$$p = \frac{W}{B} (1 \pm \frac{6e}{B}),$$

where  $e$  denotes the eccentricity of  $W$  and  $B = 5\frac{1}{2}$  in. It will be observed that vertical rail gives a maximum pressure (at the inside edge) 12 per cent. greater than that for canted rail.

Since stresses are of more practical importance than pressures, the advantage lies with the vertical rail from the aspect of rail stress alone as is only to be expected.

*Note.*—Diagram "A" can of course be used to find the actual unit stress at any point in the rail section caused by any given bending moment  $M$  at that section, for the

stress  $f = \frac{M}{A} \times \frac{y}{k^2}$ , where  $A$  is the cross sectional area of the rail.

Similarly the actual unit pressure at any point in the base can be found by multiplying the corresponding unit pressure taken from the diagram by the actual load per inch length of rail.

### Case II—Curved Track, Outer Rail

Diagram "B" illustrates the case of horizontal flange thrust on the outer rail due to centrifugal force on curves. It will be realised that in the case of rail in curves all planes, stresses, and pressures vary with the radius, superelevation, and speed. For

the sake of example, the thrust  $T$  has been calculated for unit wheel load  $W$  per unit length of rail on a curve of 300 m. radius at a speed of 60 k.p.h. and equals 0.09 units. Since  $T$  varies directly as the square of the speed, and inversely as the radius, the unit value of  $T$  can readily be found for any other curve and speed. Once the point of application and direction of the wheel load  $W$  and the thrust  $T$ , have been found, the two combined give the direction and the point of application of the resultant pressure  $R$  on the base, which in the case of rail normal to sleeper ("Vertical rail") falls 0.3 in., and for canted rail 0.12 in., to the inside of the centre of the foot as shown, the points of application of  $W$  being  $P$  and  $P'$ , as before.  $V$  and  $V'$  are the points of intersection of the line of action of  $T$  with  $W$  and  $W'$  respectively.

The angles which the planes of loading and of the neutral axis make with the  $y$  axis of the rail, are found as follows :—

Let  $\alpha$  denote the angle of super-elevation, and suppose the rail is laid vertical to the sleeper. Then if  $\beta$  denotes the angle which the plane of loading R makes with W,

$$\tan \beta = \frac{T}{W} = 0.09438, \text{ and the angle which}$$

the plane of loading  $R$  makes with the  $y$  axis of the rail section is  $\theta = \beta - \alpha$ .

For 300 m. radius, and 60 k.p.h., the superelevation is 11 cms., and the gauge is widened to 1.682. The width of the rail head is, say, 7 cms. Therefore :

$$\sin \alpha = \frac{11}{175} \text{ and } \tan \alpha = 0.06288, \text{ or } \alpha = 3^\circ 35' 54''.$$

$$\beta = 5^{\circ} 23' 30'', \text{ therefore } \theta = 1^{\circ} 47' 36'', \tan \theta = 0.03131.$$

Therefore  $\tan \theta' = \frac{1.02^2}{2.21^2 \times 0.03131} = 6.804$  or  $\theta' = 81^\circ 38' 34''$  as drawn, the plane of loading R being to the right of the y axis.

If the rail is laid canted, and  $\gamma$  denotes the angle of cant,  $\theta = \beta - \alpha - \gamma$ .  $\tan \gamma = 0.05$ , or  $\gamma = 2.51' 46''$ ,  $\beta$  and  $\alpha$  have the same values as before, therefore :

$$\theta = -1.04' 10'', \text{ and } \tan \theta = 0.1867$$

$$\tan \theta' = \frac{1.02^2}{2.21^2 \times 0.01867} = 11.4116$$

or  $\theta' = -84^{\circ} 58' 29''$

as drawn, the minus sign indicating that the plane of loading  $R$  is to the left of the  $y$  axis. For this case,  $k_z$  for canted rail = 2.21 in., and for vertical rail = 2.20 in., as shown. Having measured the distances  $y$  we have:

Max. tensile stress in the canted rail

$$\left(1 - \frac{3 \cdot 12}{2 \cdot 21^2} \times \frac{2 \cdot 20^2}{3 \cdot 27}\right) \times 100, \text{ which is}$$

5 per cent. less than its value for vertical rail, and the maximum compressive stress in the canted rail =

$$\left(1 - \frac{3 \cdot 14}{2 \cdot 21^2} \times \frac{2 \cdot 20^2}{3 \cdot 15}\right) \times 100 \text{ which is}$$

1.2 per cent. less than its value for vertical rail.

The difference in stress is much smaller than for straight track, but it should be noted that in that case the canted rail is stressed more than the vertical rail.

The calculated maximum and minimum unit pressures in the two cases are as



indicated in the diagram, from which we obtain the following result:—

The maximum pressure for the vertical rail is 16 per cent. more than that for the canted rail. This is similar in kind to the result reached in the case of straight track.

#### Case III.—Curved Track, Inner Rail

(See diagram C.)

The points of application of  $W$  are the same as before.  $W$  and  $W'$  combined with  $T = 0.094 W$  give the direction of the resultant force on the rail  $R$  (and  $R'$ ), and its eccentricity at the base of the rail.

$\theta$  for the canted rail =  $\beta - \alpha + \gamma = 4.39' 22''$ , and  $\tan \theta = 0.08145$ . Therefore  $\tan \theta' = \frac{1.02^2}{2.21^2 \times 0.08145} = 2.61531$ , or

$\theta' = 69.04' 30''$ . For the "vertical" rail,  $\theta = \beta - \alpha = 1.47' 36''$ , as for the outer rail and in this case  $\theta' = 81.38' 34''$ , as before.

The swing radius  $k_s = 2.11$  in. and  $k_s' = 2.20$  in. Having measured the various distances  $y$  from the neutral axis to the extreme fibres in each case, we have:

Maximum tensile stress in the canted rail is greater than that in the "vertical" rail

by  $100 \left( \frac{3.72}{2.11^2} \times \frac{2.20^2}{3.25} - 1 \right) = 13$  per cent.

Maximum compressive stress in the canted rail is  $100 \left( \frac{3.22}{2.11^2} \times \frac{2.20^2}{3.16} - 1 \right) = 10.1$  per

cent. more than that in the "vertical" rail.

The maximum and minimum pressures may be compared as before. It will be noted that the eccentricity of  $R$  for the canted rail is about four times greater than the eccentricity in the outer rail, and for the "vertical" rail the eccentricity is twice that in the outer rail. There is, therefore, a greater variation in pressure between the inner and outer edges of the rail base, and the maximum pressure in the inner rail, is about 27 per cent. greater than that in the outer rail when the rail is "vertical," and about 34 per cent. greater when the rail is canted. This deduction, of course, assumes that the wheel load on each rail is the same, i.e., that the superelevation is correct for the speed. If the superelevation is more than the speed warrants, then the inner rail will take a greater proportion of the axle load than the outer rail.

Similarly, no comparison of the stresses in the inner and outer rails can be made unless the bending moment in each rail is the same.

#### Case IV.—Curved Track, Inner Rail

Vehicle at rest or moving dead slow, see diagram D. In this case there is no centrifugal force, otherwise the conditions are the same as for case III.

For the canted rail the angle  $\theta$  which the plane of loading makes with the  $y$  axis is

equal to  $\alpha - \gamma = 0.44' 08''$ ,  $\tan \theta = 0.01284$ .

$\therefore \tan \theta' = \frac{1.02^2}{2.21^2 \times 0.01284} = 16.59098$

or  $\theta' = 86.33' 02''$ . For the vertical rail, the angle which the plane of loading makes with the axis  $y$  is equal to  $\alpha = 3.35' 54''$ ,  $\tan \alpha = 0.06288$ .

$\therefore \tan \theta' = \frac{1.02^2}{2.21^2 \times 0.06288} = 3.38768$ , or  $\theta' = 73.33' 15''$ , as drawn in the diagram.

$k_s$  for the canted rail is 2.21 in. and for the vertical rail 2.13 in. Measuring the distances from the neutral axis to the extreme fibres in each case, we have:

Maximum tensile stress in the canted rail is  $\left( 1 - \frac{3.06}{2.21^2} \times \frac{2.13^2}{3.57} \right) 100$ , say 18 per cent. less than in the vertical rail.

Maximum compressive stress in the canted rail is  $\left( 1 - \frac{3.12}{2.21^2} \times \frac{2.12^2}{3.2} \right) 100 = 9$  per cent. less than its value for the vertical rail.

Owing to the eccentricity of the load  $W$  on the rail base being the same (0.07 in.) in both cases, but on opposite sides of the centre, the maximum and minimum unit pressures on the base have the same values, but in the canted rail the maximum pressure is at the outer edge, while in the vertical rail, the maximum pressure is at the inner edge.

#### Standard Carriage Seat Dimensions in the U.S.A.

(Concluded from page 479)

an angle, to compensate for the reduced depth. As to the length of the seat from front to back, it is necessary to provide for the long-legged, for a length that is too short results in the underside of the thigh near the knee pressing heavily against the front edge of the seat, and this causes great discomfort if the pressure is continued for any length of time. A seat height of  $16\frac{1}{2}$  in. and a length of 20 in. were found to be the most generally acceptable, and to accommodate in comfort 90 per cent. of the persons measured. If the back of the seat is upholstered to a convex profile, a corresponding addition must be made to the seat length.

As to seat back height, it was found that to give support to the base of the skull, a height of 28 in. from the seat level was found to be the most suitable. If this dimension be reduced, the seat width should be increased, to allow a tall individual to sit farther forward. A good general average angle of seat to seat back was found to be 96 deg. The most practical width of seat for a single occupant was found to be 19 in., and this allows for overcoats, padded shoulders, and some degree of movement without disturbing the other occupant of a double seat. Small individuals are as comfortable, if not more comfortable, in a wider seat than in a seat which is no wider than their shoulder breadth. The height of the armrest above the seat is governed by the proportion of the length of the upper arm to the length of the torso. Thus a man with a long torso and long arms may have the same height of elbow above seat as a man with short torso and short arms. Too high a rest either means an uncomfortable hitching up of the shoulders, or more lateral space, so that the elbows may hang clear of the armrests.

A final problem was that of compression, which depends on a number of variable factors. These are the weight of the sitter, the area compressed, the distribution of weight over the area of compression, the elasticity of the cushion, and the variation

in the compressibility of the cushion are different distances from the supporting frame. Variations in body build affect the distribution of weight; further, the sitter varies his or her posture, and does not always sit upright in one defined spot. The result of compression study, however, was that it was not found desirable to standardise the shape of seat or back cushions. Other matters on which no standardisation policy was reached were the overall width of seats, seat spacing, footrests, seat pedestals, and rotating and reclining seat mechanisms. The dimensions finally agreed by the sub-committee, as representing the railways, with the manufacturers are as shown in the table and drawing on page 479.

**AWARDS OF L.N.E.R. MEDAL.**—Before the meeting of the L.N.E.R. Board on October 26, the Chairman, Sir Ronald Matthews, presented two of the staff with the L.N.E.R. Medal for outstanding courage and resource. One of the recipients was Mrs. V. M. Hewitt, gatekeeper at Drakes Lane Crossing, Earsham, Suffolk, who is the first woman employee of the L.N.E.R. to receive the medal. While a convoy of U.S. lorries conveying "cluster" bombs packed in wooden cases was crossing the line, a number of these cases fell on the track. Although asked by the U.S. troops to run to safety, Mrs. Hewitt's first thought was for the safety of rail traffic, and by prompt action she caused an oncoming train to stop 175 yards from the crossing. Without her warning the train probably would have run into the cases of bombs and a serious accident would have resulted. The other recipient of the L.N.E.R. Medal was Driver T. H. Stainton, of 4, New Church Terrace, Selby. Driver Stainton was working a goods train, the leading wagons of which contained bombs, when he noticed that one of the sheets covering a loaded wagon was on fire. He instructed his fireman to bring the train to a stand while he himself jumped off and ran to the wagon which was on fire, the eighth from his engine. The train came to a standstill; Driver Stainton uncoupled

the leading seven wagons of bombs from the burning vehicle, rushed back to the footplate and drew them ahead. Immediately afterwards a small explosion occurred, succeeded by a major one which killed an L.N.E.R. fireman on another engine 150 yards away and did considerable damage to rolling stock, track and buildings. There were indications that no less than 93 500-lb. bombs were involved in the explosion, which, but for Driver Stainton's prompt action, probably would have had far more serious consequences.

**RAIL AND ROAD TRANSPORT IN EIRE.**—Mr. A. P. Reynolds, Chairman of the Irish Transport Company (C.I.E.), speaking to a deputation from the Irish Retail Traders' Protective Association at a conference held on October 18, at Kingsbridge Station, Dublin, said it was altogether erroneous to suppose that the company was seeking to develop road transport at the expense of the railway. The branch lines which had been closed down would be re-opened immediately the fuel situation permitted. The company did not propose to use the present position to perpetuate the closing of branch lines; the main objective was the provision of efficient cheap transport, whatever form it took.

**G.W.R. SAFETY MEASURES FOR FOGGY WEATHER.**—The G.W.R. has spent over £3,000,000 on its automatic train control which operates throughout the system. The apparatus in the enginemaster's cab by whistle indicates whether the signals, which govern the passage of a train are showing "Caution" or "Clear," and if a "caution" signal is passed the automatic brake is actuated and brings the train to a standstill. Searchlight signals are fixed between Paddington and Southall, and at Bristol and Cardiff. The company has 7,000 specially-trained fogmen who repeat to the enginemaster by means of detonators the position of the running signals. Stationed in "bad" areas throughout the system are 34 snow ploughs and 165 steam lances. The steam lance de-ices points and other fittings on the tracks.

## Supervisory Substation Control on the G.I.P.R.

*The Great Indian Peninsula Railway has converted all substations beyond Kalyan, on both the Igatpuri and Poona lines, to unattended operation*

By E. C. B. Thornton, A.M.I.E.E.

Traction Engineer (Distribution) G.I.P.R.

ELECTRIC traction, on the 1,500-volt d.c. overhead system, fed through rotary converter substations, was introduced in 1930 on the Great Indian Peninsula Railway from Bombay to Kalyan and thence north-east to Igatpuri and south-east to Poona. Between the junction at Kalyan and Igatpuri and Poona there are, as shown on the accompanying map, 12 substations, all equipped by the British Thomson-Houston Co. Ltd., except that at Kalyan, provided by the General Electric Co. Ltd. At that place and at Thakurwadi the main a.c. supply is at 22,000 volts; at the remaining substations it is at 95,000 volts. Each attended substation usually controls an unattended one, 7 to 15 miles away, by supervisory control; between substations there is a track cabin with circuit breakers for paralleling the overhead wire sections. The junction points between the 7 separate supervisory systems were

at track cabins which were divided into two, so that the two feeder circuit breakers feeding the contact wires towards one controlling substation were fed from that one, and those feeding in the opposite direction were fed from the other.

The British Thomson-Houston's attended and unattended substations were virtually alike; the only difference in the latter was that the relays and protective devices took the place of the operator. The performance of the unattended substations in many ways was superior to that of the attended ones. As the buildings were locked there was less ingress of dust and less cleaning of equipment required. The protective devices functioned more rapidly than an operator could act. A considerable saving of wages could be obtained if the staff could be removed from the attended substations, and therefore it was decided to

extend supervisory control to all substations and track cabins beyond Kalyan. This involved only the addition of the necessary protective and control apparatus. It was decided to provide both "opening" and "closing" control for the circuit breakers at all track cabins; previously certain track cabins only had "opening" control.

### Extension of Supervisory Control

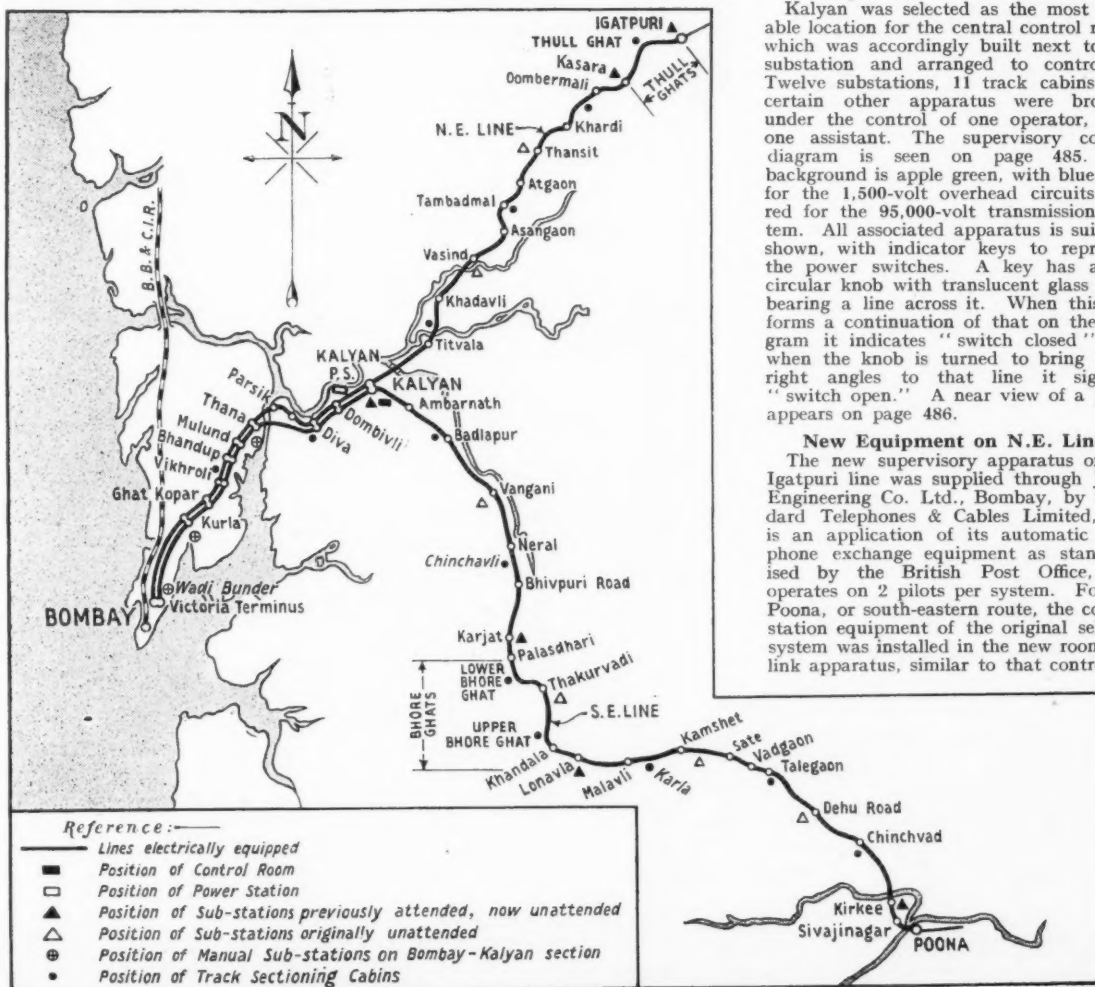
The conversion of all substations beyond Kalyan to unattended operation was expected to give a return of 15 per cent., after paying depreciation charges. The original supervisory control had been provided by Standard Telephones & Cables Limited, using its selector apparatus, virtually an application of its well-known traffic-control equipment, but it was found necessary to depart from the original intention of extending existing equipments. The original design was no longer in production, as modern developments had superseded it. There was enough existing equipment, however, to equip the south-eastern line to Poona, if concentrated there, and it was decided to do this and provide new apparatus for the north-eastern line to Igatpuri; sanction to proceed was given in 1938, but the work was not completed until towards the end of 1943.

### Kalyan New Control Room

Kalyan was selected as the most suitable location for the central control room, which was accordingly built next to the substation and arranged to control it. Twelve substations, 11 track cabins and certain other apparatus were brought under the control of one operator, with one assistant. The supervisory control diagram is seen on page 485. Its background is apple green, with blue lines for the 1,500-volt overhead circuits and red for the 95,000-volt transmission system. All associated apparatus is suitably shown, with indicator keys to represent the power switches. A key has a flat circular knob with translucent glass front bearing a line across it. When this line forms a continuation of that on the diagram it indicates "switch closed" and when the knob is turned to bring it at right angles to that line it signifies "switch open." A near view of a panel appears on page 486.

### New Equipment on N.E. Line

The new supervisory apparatus on the Igatpuri line was supplied through Jost's Engineering Co. Ltd., Bombay, by Standard Telephones & Cables Limited, and is an application of its automatic telephone exchange equipment as standardised by the British Post Office, and operates on 2 pilots per system. For the Poona, or south-eastern route, the control station equipment of the original selector system was installed in the new room and link apparatus, similar to that controlling



Electrified lines of G.I.P.R. showing sections fitted with supervisory control

the north-eastern line equipment, inserted between it and the diagram. Appearance and operation of the diagram was thus practically the same for both systems.

The selector system on the south-eastern line requires 3 pilots for each system, and both on that and the north-eastern line two independent supervisory systems are provided; alternate substations and one half of each track cabin are connected to each system as shown in the diagram below. Thus in the event of one system failing, alternate substations only are affected and supply to the overhead wires can be maintained through the track cabins at each end of the affected substations' sections. One of the north-eastern systems extends to Kalyan power station. The condition of the outgoing feeder-coil circuit-breakers is indicated on the diagram and visual operating instructions for them are sent into the station by means of the apparatus.

#### Principles of Operation

In the original apparatus the control impulses are alternately positive and negative and are generated by stepper switches, set in operation by actuating the diagram key and pressing a trip button. These switches make and break the circuit of a

telegraph pole-changing relay, which itself changes over the polarity of the pilot wires feed. Selectors, in series with condensers across the pilot wires at the substations and track cabins, pick up these impulses, which are broken into code groups by the sending apparatus, but only the selector coded to a particular code will respond to that code and complete the circuit for operating the power device concerned.

The indication impulses are generated by a motor-driven code wheel, set in motion by interlocks on the power switch which has been operated. They are sent out over the same pilot wires, but being unidirectional cannot affect any selector, and are picked up by a relay in the control room in series with the pilot wires. Its contacts are in series with a pole-changing relay. The contacts of the last-named control a circuit across which the indication selectors are connected in series with condensers. These selectors function similarly to those mentioned above. The circuit completed by the one set to the incoming code operates relays of the link apparatus to light the desired lamp on the diagram.

There is a lock-out circuit from the control room looping into each substation and

track cabin, preventing two substations or track cabins from indicating together or a control and indication being carried out simultaneously. Two devices at the same location are prevented from indicating together by a local circuit lock-out. The south-eastern systems are sectionalised at Lonavla, where there are line repeater relays, on account of the low insulation resistance experienced on the pilots during the monsoon.

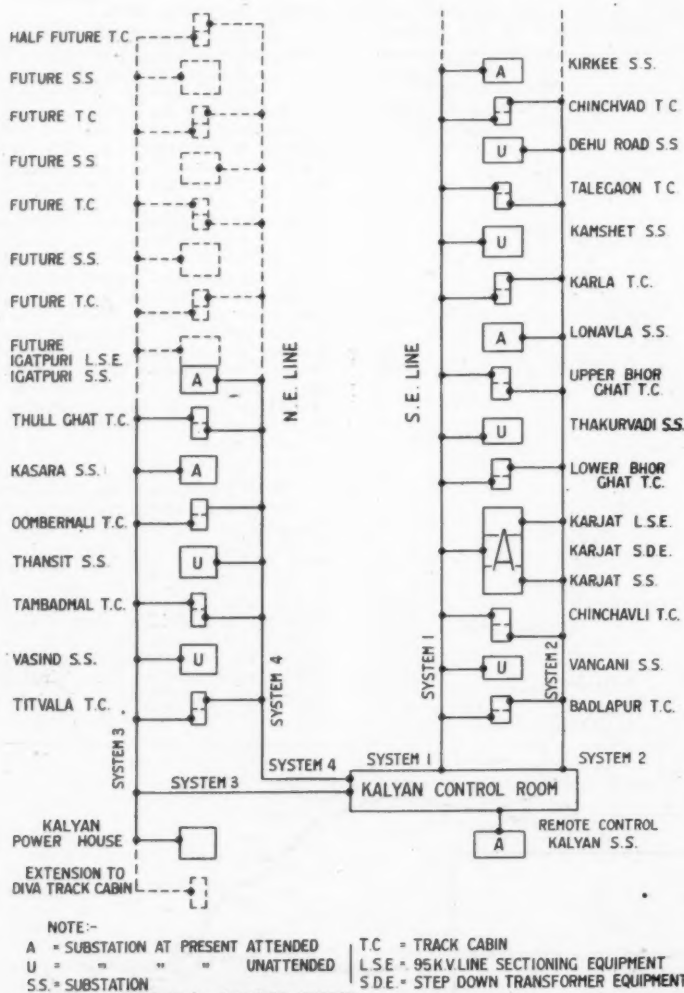
#### Apparatus Used on the N.E. Line

The latest apparatus carries out the same functions as the old in a somewhat different manner. The stepper switches in this case act as searchers and senders, to pick up whichever piece of apparatus is endeavouring to operate and send out the impulses over the pilot wires. At the receiving end the impulses pass through similar switches, which "decode" them and operate link relays in the control circuits of the power switch or of the diagram, for controls and indications respectively.

The control code is uni-directional and broken up into 5 groups of impulses. The number of impulses in the total of the first two groups is a constant and the number in the last three is another. The first two call the substation or track cabin required, the last three the particular power switch there. If the total does not equal the constant, in each case, no control is effected. For the indication circuit the impulses are broken into two groups, both of seven impulses. Differentiation between one station and another is obtained from the first group, which is fundamentally of negative impulses, by the positive impulses in it. The power switches indicate by the second group; each switch is represented by a particular impulse in a series. Its "closed" or "open" position is given by a positive impulse for the former and a negative for the latter position. These positive and negative impulses are picked up in the control station by the receiving apparatus and translated by it into indications on the diagram, illuminating the station name in the first group and the power switch in the second; those switches which have changed position emit a flashing signal. No separate lock-out is required; this effect is provided instead by relays in the control room, substations and track cabins which prevent two controls, or a control and indication, from coming through together. On both the north-eastern and south-eastern systems the indicating apparatus in a substation or track cabin is made to check that the diagram indications correctly represent the positions of the power switches.

#### Method of Operation

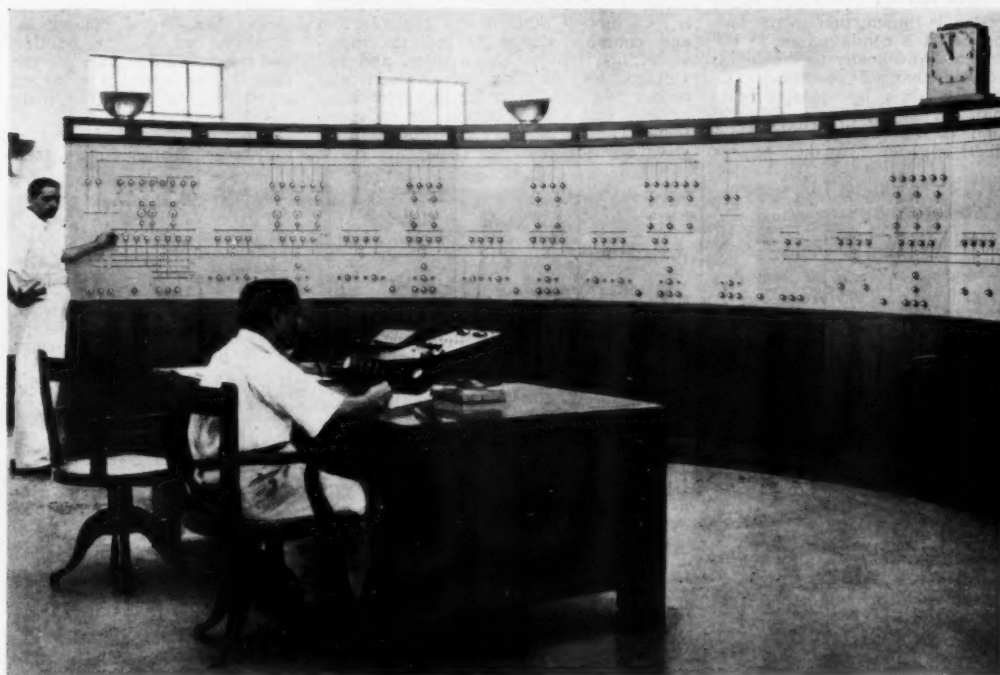
When the operator in the control room desires to close or open a power switch along the route, or to start up or shut down a rotary converter, he turns the appropriate diagram key. The lamp behind its cover then commences to flicker. He then presses the "close" or "open" button, as the case may be, and the apparatus sends out the control impulses, which are transmitted to all locations. Only the desired apparatus responds to them, however. As soon as the power switch has operated an indication is sent back, the impulses of which are ignored by all but the receiving apparatus. This, by means of the link circuits, transfers the incoming message to the diagram and the lamp behind the key concerned commences to flash. A response to a control operation is thus shown by a flash superimposed on a flicker, but when the incoming signal is caused by a switch tripping automatic-



Schematic diagram of control systems



# Supervisory Substation Control on the G.I.P.R.



*Left-hand half of supervisory control diagram*



*Right-hand half of supervisory control diagram*

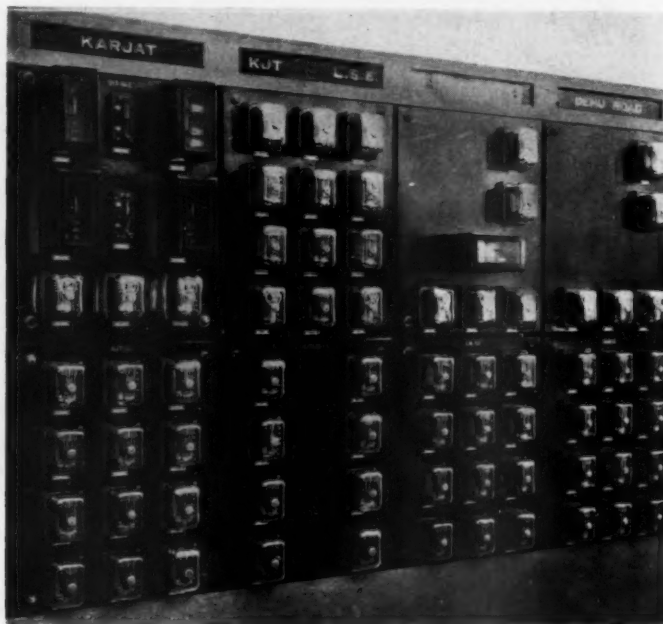
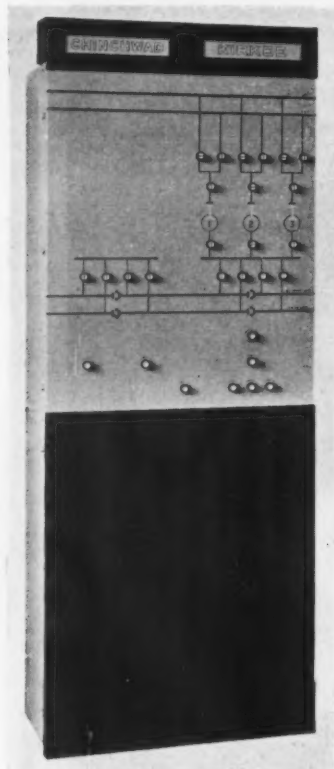
ally the station name on the diagram becomes illuminated, all lamps relating to that station light up but that which is indicating flashes with a steady, not a flickering, light and an alarm bell rings. Thus attention is drawn, first to the fact that an indication is coming, then to the station concerned and finally to the device there that has changed position. The operator acknowledges by quarter-rotating the indicator key to agree with the new position of the device, whereupon a steady light is given. He then presses

control room is air conditioned to maintain a steady temperature and degree of humidity, and to keep out dust.

Other apparatus consists of a "desk turret" and telephones. The desk turret is seen on the table in the control room and contains alarms to indicate supervisory line failure, blown fuses, and low voltage, for all four systems. It also carries two voltmeters for the supervisory systems and a reset button for each system. Three telephones are provided; one gives connection to the G.I.P. automatic

of the two lines between this exchange and the control room, the supervisory control room operator can speak to any traction control telephone on the north-eastern and south-eastern lines. He has three channels of communication with Bombay, one *via* the traction exchange and the trunk line, one *via* the "all stations" line, and the third on the automatic telephone. All telephones are hand microphones.

The control-room operator works under the traction power controller in Bombay,



*Above: Selectors and polarised relays. Original apparatus as mounted in the control room*

*Left: Detailed view of one of the supervisory control panels*

the re-set key and extinguishes the lamps. In the normal condition all diagram lights are out.

#### Miscellaneous Details

The original apparatus was front-mounted on the switchboards, arranged to line up with those carrying the control apparatus of the substation equipment, as shown in the right-hand illustration on this page. In the new apparatus the supervisory control equipment is contained in sheet-steel cabinets, which take up very little space. The supervisory

telephone system in Bombay and district, and the others to a switch box, to which are brought four lines, two from the Kalyan traction exchange, the traction control line to Bombay looping into all railway stations and substations on the way, and a line from the Tata Power Company's receiving station. At the Kalyan traction exchange is centralised the ringing apparatus for the traction control telephone circuits which loop into all stations, substations, etc.; there is also a trunk line direct to Bombay. By means

located in Victoria Terminus in the same room as the traffic controller, with whom he works in liaison. Kalyan substation is not fully unattended; regular tours of it are part of the duties of the control-room operator. Although this installation is not large, in the sense of controlling a large number of stations, it does cover a considerable mileage. From Kalyan to Igat-puri is 52 miles and from Kalyan to Kirkee 81. The length of route controlled, with the two miles to Kalyan power station, is 135 miles.

**RAILWAY FREIGHT REBATES REVIEW.**—Notice is given in *The London Gazette* of October 30 that the Railway Rates Tribunal will sit at 10.30 a.m. on November 21 at the Office of the Tribunal, Wellington House, 125-130, Strand, London, W.C.2, to review the operation of the Railway Freight Rebates Scheme for the year ended September 30, 1945, pursuant to the provisions of the Railway Freight Rebates enactments, 1929 to 1943.

Notice is also given that the railway companies to which the said enactments apply have filed with the Tri-

bunal an application (1945 No. 549) that there shall be paid out of the Railway Freight Rebates Fund in respect of administrative expenses in respect of the period commencing on October 1, 1945, and ending on September 30, 1946, a sum of £13,250, such sum to be exclusive of any payment out of the said fund authorised by the Minister of Transport under the provisions of sub-section (3) of section 2 of the Railway Freight Rebates Act, 1936, which application will also be heard at the above-mentioned time and place. Any railway company to which the said enactments apply or

representative body of traders interested, which may be desirous of being heard before the Tribunal on the review, must file a notice of such desire, and any person desiring to object to the aforesaid application must file a separate notice of objection at the Office of the Registrar, Wellington House, 125-130, Strand, London, W.C.2, on or before November 16, 1945.

**ODDH TIRHUT RAILWAY.**—A Government of India notification states that in future the Oudh & Tirhut Railway will be known as the Oudh Tirhut Railway.

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## RAILWAY NEWS SECTION

## PERSONAL

The Rt. Hon. L. S. Amery has rejoined the board of the Gloucester Railway Carriage & Wagon Co. Ltd., in the place of Sir John H. Percival, who has retired.

Senhor Mauricio Joppert has been appointed Minister of Transport & Public Works in the new Brazilian Cabinet.

Mr. Hubert H. Scott, Chief Clerk to the Vice-President of Traffic, Canadian Pacific Railway, has been appointed Assistant to the Vice-President of Traffic.

We regret to record the death on October 29, in his 75th year, of Mr. James Robert Robertson Silver, formerly Locomotive & Carriage Superintendent, Bengal & North Western Railway, who retired in 1928.

## L.N.E.R. APPOINTMENTS

Mr. C. J. H. Selfe, who at present is filling temporarily the post of Principal Assistant (Operating), Central Traffic Office, Marylebone, to be District Traffic Superintendent, Aberdeen, *vice* Mr. J. G. Singer, who is retiring.

Mr. C. G. Jarrett has been released from H.M. Forces and has resumed duty as Hotels Superintendent, Scottish Area. Mr. G. A. Souter, who has been filling the post in an acting capacity, has been appointed Assistant Hotels Superintendent, Southern Area.

Mr. J. I. G. MacGregor, Assistant Engineer, Edinburgh, L.N.E.R., retired on October 27, after 47 years' railway service. In the North British Station Hotel, Edinburgh, in the presence of a large gathering of the Engineer's staff, including the District Engineers from Glasgow, Edinburgh, Thornton, and Aberdeen, and the Acting District Engineer, Carlisle, Mr. W. Y. Sandeman, Engineer, Edinburgh, made a presentation to Mr. MacGregor on behalf of his colleagues and other railway friends.

Recent changes in the organisation of the British Thomson-Houston Co. Ltd. include the following: in addition to appointments already held, Mr. H. Jack becomes Chief Electrical Engineer; Mr. A. A. Pollock, Chief Mechanical Engineer; Mr. G. S. C. Lucas, Assistant Chief Electrical Engineer; and Mr. K. R. Hopkirk, Assistant Chief Mechanical Engineer. These arrangements do not affect the Turbine Engineering Department, of which Mr. R. H. Collingham remains Chief Engineer.

The following announcement appears in the Supplement to *The London Gazette*, dated October 30, under the heading of Supplementary Army Reserve of Officers: Corps of Royal Engineers:—

Major C. P. Parker, M.C. (32519), having exceeded the age limit, relinquishes his commission, September 6, 1945, and is granted the honorary rank of Lt.-Colonel.

Colonel Parker is District Engineer, Hull, L.N.E.R. He has served throughout the war with the Royal Engineers, and recently was made an O.B.E.

We regret to record the death, at the age of 54, of Colonel Norman A. Ryan, who was General Manager (Lines West), Chicago, Milwaukee, St. Paul & Pacific Railroad, until May, 1942, when he was called on for active service and became Assistant Chief of Transportation & Chief of the Military Railways Division, U.S.A. Army Transportation Corps, European Theatre of Operations. He had been commissioned as a Colonel in the Engineer

for the shops, to apportion the equipment among the Transportation Corps operating and shop battalions, and to organise production and operating schedules. In 1944 Colonel Ryan was awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding duties." Colonel Ryan was a veteran of the Railway Transportation Corps of the war of 1914-18; he entered the corps as a Private in 1918, and left as a First Lieutenant in 1919, after seeing service with the American Expeditionary Force.



*The late Colonel N. A. Ryan*

General Manager (Lines West), Chicago, Milwaukee, St. Paul & Pacific R.R., 1939-42; Assistant Chief of Transportation Corps (E.T.O.)

Corps Reserve on October 1, 1939, shortly after his appointment as General Manager (Lines West), Chicago, Milwaukee, St. Paul & Pacific Railroad. Colonel Ryan entered railway service in 1909 in the Operating Department of the Chicago, Burlington & Quincy Railroad. Later he served with the Southern Pacific before returning to the Chicago, Burlington & Quincy Railroad; in 1917 he joined the Los Angeles & Salt Lake Railroad. On returning from military service, he joined the Chicago, Milwaukee, St. Paul & Pacific Railroad, of which eventually he became General Manager (Lines West). When he assumed his post as Assistant Chief of Transportation & Chief of the Military Railways Division in May, 1942, he had to prepare for co-ordination with the British railways, and to plan for the construction, assembly and repair of locomotives and freight vehicles. It was necessary to make an extended survey of the facilities and installations available in the United Kingdom, to secure equipment

The second Viscount Finlay, who died on June 30, a Lord Justice of Appeal since 1938, and, for a year previous to that appointment, *ex-officio* Commissioner for England on the Railway & Canal Commission, left £63,559.

We regret to record the death, at the age of 75, of Mr. Herbert B. Taylor, Designing Engineer of the General Railway Signal Company, Rochester, New York. He was born in Manchester, and had been engaged in brake engineering and seen service with some signalling firms now no longer in existence. He had been continuously with the General Railway Signal Company since 1923.

The King has appointed Mr. Frederick John Burrows to be Governor of Bengal, in succession to Mr. R. G. Casey, who has resigned, and who will vacate the appointment on a date to be arranged in February next. Mr. Burrows is a former President of the National Union of Railwaymen.

Mr. George Hughes, C.B.E., M.Inst.C.E., M.I.Mech.E., whose death, at the age of 80, we recorded briefly last week, was Chief Mechanical & Electrical Engineer of the London Midland & Scottish Railway from January 1, 1923, until his retirement in 1925. Previously he had been Chief Mechanical Engineer of the Lancashire & Yorkshire Railway from 1904, and Chief Mechanical & Electrical Engineer of the London & North Western Railway, on the amalgamation of those companies, from January 1, 1922. Mr. Hughes received his engineering training as a premium apprentice at Crewe Works, L.N.W.R., from 1882 to 1887. In the latter year he went to Horwich, L.Y.R., and was employed in the millwright shop. Afterwards he was placed in charge of the Testing Department, and was made Inspector of Purchased Material for the Chief Mechanical Engineer's Department. In 1894 he was appointed Assistant to the Outdoor Locomotive Superintendent, and afterwards took charge of the Horwich Gas Works and general gas lighting on the L.Y.R. In 1895 Mr. Hughes was appointed Chief Assistant in the Carriage & Wagon Department at Newton Heath. From 1899 to 1904 he was Principal Assistant to the Chief Mechanical Engineer at Horwich, and Manager of the Locomotive Works there, and in March, 1904, was appointed Chief Mechanical Engineer. On the L.N.W.R.-L.Y.R. amal-





**The late Mr. George Hughes**

Chief Mechanical & Electrical Engineer, London Midland & Scottish Railway, 1923-25

gamation on January 1, 1922, Mr. Hughes became Chief Mechanical & Electrical Engineer, L.N.W.R., and on the formation of the L.M.S.R. he became Chief Mechanical & Electrical Engineer of that railway, from which position he retired in 1925. Some reference to Mr. Hughes' work is made in an editorial note elsewhere in this issue.

Mr. Leonard Sears, M.Inst.T., Assistant Divisional Superintendent, London Central Division, Southern Railway, has retired. He commenced his railway career with the former S.E.C.R. in the Goods Manager's Office in 1899 at Holborn, and transferred to the Operating Department in 1910. He has been an Assistant Divisional Superintendent since 1912, when he was appointed to the London District of the S.E.C.R. at London Bridge. In 1914 he went to the Western District at Redhill. On the amalgamation in 1923 Mr. Sears was



**Mr. Leonard Sears**

Assistant Divisional Superintendent, London Central Division, Southern Railway, 1933-45

appointed Assistant Divisional Commercial Manager at Brighton, and in September, 1933, he took up the post from which he has now retired. He thus has spent both wars at Redhill Divisional Headquarters. He was largely responsible, from the railway side, for the successful inauguration of the Worthing Tomato Growers Association. His father, the late Mr. E. J. Sears, had been Superintendent of the Line, South Eastern Railway.

Mr. Reginald H. Weitzel, Chief of Staff, Traffic Department, Central Argentine Railway, who, as recorded in our October 19 issue, has been appointed General Manager's Representative for Staff & Labour Matters, was born in April, 1896, and entered the company's service in 1913 as a learner in the Traffic Department. During the war of 1914-18, he was granted special leave to volunteer, and served in the 2nd King Edward's Horse, and later as Lieutenant,



**Mr. R. H. Weitzel**

Appointed General Manager's Representative for Staff & Labour Matters, Central Argentine Railway

XX Deccan Horse, Indian Army. On his return to Argentina, in February, 1920, Mr. Weitzel was appointed, successively, Traffic Inspector at Casilda, Galvez, Sunchales and Cañada de Gomez. In 1929 he became Secretary to the Traffic Manager, and in 1931 Chief Clerk, Assistant Traffic Manager's Office, Rosario. In 1936, he was promoted Assistant Chief of Staff, Traffic Department, and three years later he became Chief of Staff.

Mr. Alfred William Green, L.A.A., M.Inst.T., who, as recorded in our November 2 issue, has retired from the position of Accountant to the London Passenger Transport Board, joined the Accountant's Department of the Underground Electric Railways Co. of London Ltd. in 1905. Previously he had gained experience in the Accountant's Department of the British Thomson-Houston Co. Ltd. during the period of intensive electrification by that



**Mr. A. W. Green**

Accountant, London Passenger Transport Board, 1940-45



**Mr. P. G. James**

Appointed Accountant, London Passenger Transport Board



**Mr. J. B. Burnell**

Appointed Operating Manager (Central Buses), London Passenger Transport Board

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company of horse-tramway systems all over the British Isles, and the electrical equipment of the Central London Railway. After occupying various posts in the Accountant's Department of the Underground group, he became Assistant to the Accountant in 1913. In 1921 he was made Statistical Officer. On the establishment of the L.P.T.B. in 1933 Mr. Green became Accounts Officer, and in May, 1940, he was appointed Accountant.

Mr. P. G. James, B.Com. (London), A.S.A.A., Accounts Officer, London Passenger Transport Board, who, as recorded in our November 2 issue, has been appointed Accountant, entered the service of Deloitte, Plender, Griffiths & Co. in 1927 and was engaged on audits of the Board and its predecessors. In 1934 his services were lent to the Board for six months for special accountancy work, and at the expiration of that period he joined the Board's staff in the Office of the Assistant to the Comptroller & Accountant. Mr. James was made an Officer and Assistant to the Chief Accountant in 1939, and Accounts Officer in 1940.

Mr. J. B. Burnell, Divisional Superintendent, Eastern Division, Central Bus Operating Department, London Passenger Transport Board, who, as recorded in our November 2 issue, has been appointed Operating Manager (Central Buses), entered the Royal Navy in 1911, and retired with the rank of Lieutenant in 1921. He saw active service with H.M. submarines during that period. He entered the service of the London General Omnibus Co. Ltd. in 1926, and until 1927 was a Traffic Observer attached to Head Office. From 1929 to 1935 he was a Depot Superintendent and Acting Assistant Divisional Superintendent. In 1935 he was transferred to the Country Bus & Coach Section of the L.P.T.B. as Staff Assistant to the General Manager (Country Buses & Coaches), and in 1939 he became Assistant Staff Superintendent for the Road Services. Mr. Burnell was appointed Divisional Superintendent in charge of the Eastern Division

of the Central Bus Operating Department in May, 1940.

Mr. W. M. Dravers has been appointed Manager of Sheffield United Tours Limited, a B.E.T. and railway associate, in place of Mr. T. W. Hancock who, with his brother Mr. M. Hancock, has resigned for domestic reasons. Mr. Dravers was with Hebble Motor Services Limited from 1935 until September, 1939, when he joined the Army. Mr. Dravers, who attained the rank of Major and has seen service overseas, returned to civilian life a few weeks ago.

#### INDIAN RAILWAY STAFF CHANGES

Mr. E. A. Blackwood, on return from leave, has been appointed to officiate as Deputy General Manager, N.W.R.

Mr. Karnail Singh has been appointed to officiate as Deputy General Manager (Rehabilitation & Development), N.W.R.

Mr. T. G. R. Eagan, E.D., Divisional Superintendent, Multan, N.W.R., has been appointed to officiate as Divisional Superintendent, Karachi, in place of Mr. A. G. Hall, M.B.E., granted leave.

Rai Bahadur P. C. Khanna, Divisional Superintendent, Ferozepur, N.W.R., has been appointed to officiate as Divisional Superintendent, Multan.

Mr. G. C. Trehan has been appointed to officiate as Divisional Superintendent, Ferozepur, N.W.R.

Rai Bahadur A. N. Sud, Deputy Chief Engineer (Eastern), N.W.R. proceeded on 6 months' leave, preparatory to retirement, on July 16. His place has been taken by Mr. B. C. Drummond.

Mr. J. T. Hendry has been permanently promoted as Deputy Chief Engineer, S.I.R.

Mr. C. R. Martingell, on return from leave, has resumed his duties as Financial Adviser & Chief Accounts Officer, S.I.R.

Captain D. J. Bourne has been appointed to officiate as Deputy General Manager (Personnel), S.I.R.

On the return from leave of Mr. H. Hinton Cooper, C.I.E., Chief Mechanical Engineer, N.W.R., Mr. H. M. Walker, Officiating Chief Mechanical Engineer, re-

verts as Superintendent, Mechanical Workshops.

Mr. N. C. Watney, Officiating Superintendent, Mechanical Workshops, N.W.R., reverts as Deputy Chief Mechanical Engineer.

Mr. J. P. Cannon, Officiating Deputy Chief Mechanical Engineer, N.W.R., reverts as Personal Assistant to Chief Mechanical Engineer.

Mr. Gilbert S. Szlumper, Director-General of Supply Services, Ministry of Supply, since November, 1942, has been released from his appointment with effect from November 5. Mr. Szlumper was General Manager of the Southern Railway from October, 1937. He held that position until September 25, 1939, when he was appointed Director-General of Transportation & Movements, War Office. In July, 1940, he was appointed Railway Control Officer at the Ministry of Transport, and in August, 1941, he joined the Board of Trade as adviser on transport problems, and was selected by the President to look after the movement of coal during the winter of 1941-42. He resigned from the General Managership of the Southern Railway in May, 1942.

Mr. R. W. L. Harris, B.Sc., M.Inst.C.E., M.I.Mech.E., M.I.E.E., the newly-appointed Registrar & Secretary of the Professional Engineers Appointments Bureau (to which further reference is made on another page) was educated at the Royal Grammar School, Newcastle-upon-Tyne, and Armstrong College (now King's College), University of Durham. He served his apprenticeship with A. Reyrolle & Co. Ltd., and was subsequently on that company's staff for ten years, rising to the position of Personal Technical Assistant to the Technical Director and Sales Manager. In 1940 he joined Kennedy & Donkin as a senior engineer, and was engaged on work for the Central Electricity Board, Government of Northern Ireland, and other clients. He resigned to take up his new post in September.

### G.W.R. Display at Plymouth Thanksgiving Week



Staff and road vehicles of the Great Western Railway took part in Plymouth Thanksgiving week. The horse-drawn vehicle won two prizes

## Parliamentary Notes

### Government's Civil Aviation Policy

Lord Winster (Minister of Civil Aviation) in the House of Lords on November 1 presented the Government's policy for civil aviation. At the beginning of his speech, he stated that he proposed to issue a White Paper, and it was in course of preparation.

He said that the Government had decided that public ownership should be the over-riding principle in air transport, and that there should be no financial participation by existing surface transport interests in the arrangements contemplated. He wished to make it clear that that decision had been arrived at in no spirit of opposition to the surface transport interests. On the contrary, the Government's civil aviation policy would be developed with the clear intention of integrating it with the land and sea transport systems operated by those interests. He hoped that they in turn would be prepared similarly to co-operate with civil aviation in matters of common concern. It was his intention to have conversations forthwith with the representatives of the surface transport interests, and to discuss with them how far co-operation was possible, and how the mutual interests of transport by land, sea, and air could best be served within the framework of the Government's policy. He recognised that both before and after the issue of his predecessor's White Paper, railway and shipping companies had given considerable study to the problems of civil aviation, and that they and the travel agencies had experience of certain traffic problems which would confront air transport. On that account alone he should value their co-operation. Those conversations must be concluded before a White Paper could be issued.

"It is not my intention," said Lord Winster, "that civil aviation should be conducted by one monopoly corporation. It is fairly common ground that such a form of organisation is undesirable and the arguments to that effect are, in my opinion, overwhelming."

They must expand the services to meet the needs of reconstruction and at the same time build up a flexible organisation capable of developing air transport to serve people in all levels of society. The Government must ensure, through rivalry rather than competition, that the opportunity was taken to try out the several possible approaches to the problems of air transport. There was room for several organisations, but they must be of sufficient size to be able to make the best use of their equipment and to hold their own in the face of foreign competition.

He intended to establish as soon as possible, in addition to B.O.A.C. for the Commonwealth, North American and Far Eastern services, a corporation for operating European and internal air services, and another for South American services. It might well be found that additional corporations, or subsidiaries, were desirable for those three, and he should form those at his discretion. All such corporations or subsidiaries would be financed wholly out of public funds, and he should take powers to appoint their boards and to determine such appointments, if he ever thought that necessary. The boards would be required to conform with Government policy generally, as well as with broad directives which the Minister might issue to keep the corporations in step on large issues. But he should not regard it as part of the Minister's duty to interfere, unless exceptional cause was shown, with the day-to-day work of administration.

His proposals would require legislation. Until that had been put through, B.O.A.C., which at present functioned under a directive issued on October 6, 1944, would continue to be responsible for the operation of all external routes, and he should request B.O.A.C. to take steps to inaugurate the European and South American services, and operate them until such time as the other corporations had been formed. Meanwhile, it was his intention to strengthen the board of B.O.A.C. A very complicated, and deliberately complicated, procedure was involved to enable B.O.A.C. to operate internal air services. Until legislation was introduced he should ask the existing internal air line operators to continue to operate.

To ensure full consideration of the needs of the public, a tribunal would be established to consider representations on such matters as the adequacy of facilities and fares and rates on United Kingdom air lines. The corporations would operate scheduled services in the areas allocated to them. They would also be empowered to engage in charter flying, but would have no monopoly of that, as they would have in the case of the scheduled services. Charter flying would be open to private operators. The ban on private flying would be removed with effect from January 1, 1946.

All transport airports required for scheduled services would be acquired by the Ministry of Civil Aviation and pass into public ownership.

### COMPENSATION TO BE CONSIDERED

Dealing with the question of compensation, he said: "I will not go further today than to say that this matter will receive most careful consideration and that fair payment will certainly be made for any physical assets taken over. Pending legislation and after the lifting of the ban on civil flying, during that interim period, it is the case that any air transport operator legally will be free to run air services without specific permission. In the circumstances it is only right for me to mention that such an operator should bear in mind that legislation will be coming along, and that, when it does, no claim for compensation in respect of services so started will be entertained."

Prestwick would be designated as an international airport. Plans had been made for certain of our international services to be operated *via* Prestwick, the number of them to be dependent on traffic demands. The policy ensured that Scotland would be able to play its full part in civil aviation, by the opportunities provided for internal services, services between Scotland and the rest of the United Kingdom, and direct services between Scotland and overseas.

Officials from his department would have a place within the Ministry of Supply, and would work side by side and day by day with the officials of that Ministry. He proposed to keep the Brabazon Committee (on passenger needs) in existence.

In conclusion, Lord Winster reaffirmed as strongly as possible, that the Government stood for order in the air and for the orderly development of civil aviation. The Labour Government had to develop an important new form of transport. Mistakes inevitably would be made in the course of doing so, because at the present time, in civil aviation, almost everything was in an empirical state: but at least they were not going to make the old mistakes.

"Railways the world over," he continued, "developed amid a wild frenzy of speculation which has handicapped them ever since. All over the world mercantile marine services were built up amid a scramble for profits which inflicted inhuman misery and cruelty on fine seamen who were treated like beasts. That may be old his-

tory, but speculation and greed rear their ugly heads very quickly if given half a chance."

The young pilots who flew our civil aircraft, and all engaged in developing our civil aviation, should feel that they were engaged in service to the community and the community alone, which might eventually become service to the world.

Viscount Swinton reminded the House of the plan which a United Government put to both Houses of Parliament without any political prejudice about it, setting to work whole-heartedly, and without prejudice to introduce the formulae to operate, and to get the best plan they could make together for civil aviation. He quoted at length from a speech by Sir Stafford Cripps (then Minister of Aircraft Production) approving the proposals. He defied the Minister to point to anything in that scheme which would have made scramble and speculative competition possible. He knew perfectly well that that scheme divided the great territories into units. So far from there being scrambling competition, if there was criticism of the plan at all, it was that it did not allow for enough competition.

Not one single argument had been advanced by the Minister to show why that carefully considered plan should be changed, except the statement that everything must be State-owned. Why should the railways be discarded? They were the largest of the pre-war operators, apart from B.O.A.C., and were successful. Nobody would deny that. Why were the other operators, the pioneers in these services, to have no opportunity to come in? In the shipping lines they had an organisation, second to none in transport, ready to their hand to use. The travel agencies were to go by the board.

He asked if the Minister desired to have on the boards representatives of the railways, the shipping lines, and the travel agencies. The Minister was making it as difficult as possible for these people, who were essential to the success of the business, to co-operate, and as difficult as possible for him to run the show, if he was going to take the responsibility of running the show.

The essence of the old plan was that they had independent management. Was this to be a sealed-pattern management? He was absolutely horrified at the proposal, as he understood it. It meant that until he got his independent company started, B.O.A.C. was to run the whole business, and therefore the other people, with a knowledge of transport, quite frankly as great as that of B.O.A.C., were to take their orders from that body. That was a very curious position. He did not see the separate and independent management.

What chance was there in the plan for new blood? Under the Coalition Government plan they embraced, to start with, all those whom they felt could contribute at the moment.

There would be indefinite delay in a situation that was urgent and critical. Air lines from almost every country in the world were beginning to fly in here. He understood that two of the American air lines were flying here. There were others from Switzerland, Sweden, Belgium, France, Holland (he thought), and he heard there was even one from Denmark in the last few days. Under what agreements were they operating? Was there reciprocity? If there was reciprocity, when did we start, and who was to do the starting? Apparently it was all to be in the hands of the B.O.A.C. It was about time we tried to make up for lost time and not fall behind still further for the sake of an economic and academic theory.

"I think," said Lord Swinton, "that this is the most damning thing for the

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prospect of civil aviation, and of all it means to this country and the Empire. It seems to me that a practical working plan, on which we were all agreed, mobilising all our assets and ready to function at any time, is sabotaged for a political theory."

If Lord Winster really thought that the discarding of every transport organisation, and the knowledge and experience they had, was going to be the best way to keep the invisible export of air transport we so badly needed, it was a sorry day for the future of civil aviation.

Lord Rennel said the scheme of a State-owned air service was a surrender to a theory, without that elaboration in practice and detail which would have been expected, after a long delay, from the Government.

Lord Strabolgi said there was obviously great disappointment among certain of the vested interests, and he was sorry for those who put in a great deal of work on behalf of the railway companies. He did not see why that work should be lost or why they should lose the advice of those who had been briefed by the railway companies. It was certainly part of the programme of the Government to nationalise the railway companies, and that objection from the Opposition, therefore, fell to the ground.

The debate was then adjourned until November 6.

Mr. Ivor Thomas (Parliamentary Secretary to the Ministry of Civil Aviation) in the House of Commons on November 1 gave a summary of the Government's policy on civil aviation.

Mr. Herbert Morrison (Lord President of the Council & Leader of the House), in reply to Mr. Winston Churchill (Leader of the Opposition) said it was proposed to provide facilities for the discussion of the proposals.

## Questions in Parliament

### Southern Railway Suburban Services

Mr. A. M. F. Palmer (Wimbledon—Lab.) on October 24 asked the Minister of War Transport if he was aware that train services on the London suburban Southern Railway lines were not running according to the advertised times; that this was causing great inconvenience to the travelling public; and whether he would, with the railway company concerned, take steps to improve the running of these trains.

Mr. Alfred Barnes stated in a written answer: The revised timetable brought into operation on the Southern Railway's suburban lines on October 1 included a number of alterations and additional services which have had the effect of reducing the terminal margin times and making the services more susceptible to delays. Moreover, permanent-way restrictions are more numerous than before the war as a result of deferred maintenance and some of the more serious incidents of enemy action. The new time table involves many changes in the working which has been in force for a number of years, and it is bound to be some time before the new arrangements function smoothly in all respects. The average late arrival of suburban trains on the Southern Railway is at present 2.9 minutes. The company intends to improve on the present position and the working is receiving, and will continue to receive, the closest attention of the responsible traffic officers.

### Dispersion of Fog at Railway Stations

Mr. Peter Freeman (Newport—Lab.) on October 30 asked the Minister of Fuel & Power whether any arrangements had been considered to make use of the equipment

used during the war for the dispersal of fog for civilian purposes, particularly at railway stations in London and elsewhere.

Mr. E. Shinwell (Minister of Fuel & Power) in a written answer stated: The Minister of War Transport is bringing this matter to the notice of the railway companies in order that they may consider whether it would be practicable for them to provide for fog dispersal in this way. In present circumstances, however, the petrol supply position imposes a serious restriction on any developments.

### Laindon and Pitsea Train Service

Captain R. J. Gunter (South East Essex—Lab.) on October 29 asked the Minister of War Transport if, in view of the inconvenience now being suffered by rail users of Laindon and Pitsea, he would take steps to ensure a more adequate train service between Fenchurch Street and these stations, especially in view of the large number of residents of these places being engaged on essential work in the East End of London; and if, because of congestion on this section of the L.M.S.R., it was found impossible to increase the number of trains operating, he would arrange a more equitable distribution of facilities as between Southend-on-Sea and the Laindon-Pitsea section.

Mr. Alfred Barnes in a written answer stated: During the war the population of Laindon and Pitsea has increased and those towns have been given more trains than before the war. The question whether any adjustment can be made in the present Southend services to improve the service with the intermediate stations is at present under consideration by the railway company and, I am informed that a meeting is being held with the Laindon & District Railway Travellers' Association on Wednesday evening next to consider the matter. I also understand that from October 22, the 5.12 p.m. train from Fenchurch Street to Thorpe Bay calls at Laindon and Pitsea, and the train timed to leave Fenchurch Street at 5.16 p.m. has been altered to start from Barking at 5.33 p.m. to provide more accommodation for Laindon and Pitsea passengers.

### M.P.s. and Reserved Train Seats

Mr. T. W. Stamford (Leeds West—Lab.) on October 29 asked the Minister of War Transport if he would consider having seats reserved on trains on the request of Members travelling to their homes or constituencies on the last sitting day of the week, so as to enable Members to remain later in attendance at the House on that day.

Mr. Alfred Barnes, in a written answer stated: The normal arrangements for reserving seats on trains were abolished at the beginning of the war and reservations are now made only in the most exceptional circumstances. I have considered Mr. Stamford's suggestion sympathetically but have come to the conclusion that I should not be justified in making the arrangements he desires.

### Railway Sleeping Berths

Mr. J. W. Sunderland (Preston—Lab.) on October 29 asked the Minister of War Transport if he would provide sleeping berths on the Preston-Euston train on Saturday and Sunday nights.

Mr. Alfred Barnes wrote in reply: I am making enquiries into this matter and will communicate with Mr. Sunderland as soon as possible.

Squadron-Leader S. Segal (Preston—Lab.) on October 29 asked the Minister of War Transport whether he would relieve the present excessive demand for accommo-

dation on sleeping cars from Manchester and Liverpool to London at weekends by adding a sleeping car from Preston to London on Saturday and Sunday nights.

Mr. Alfred Barnes wrote in reply: I am making enquiries into this matter and will communicate with Squadron Leader Segal as soon as possible.

### Railway Fatalities During War Years

Mr. J. A. Sparks (Acton—Lab.) on October 29 asked the Minister of War Transport if he would state the number of railwaymen employed in Great Britain who were killed and injured, separately, whilst on duty, as a result of enemy action during the war years.

Mr. Alfred Barnes wrote in reply: The following statement shows the number of railway servants killed and injured on duty as the result of enemy action on the railways, or railway premises adjoining railway boundaries, during the war years.

	Killed	Injured
G.W.R. ... ..	52	241
L.N.E.R. ... ..	115	702
L.M.S.R. ... ..	48	533
S.R. ... ..	130	796
L.P.T.B. ... ..	40	111
Other lines ... ..	7	27
Total casualties ...	392	2,410

### Accommodation for Service Women

Mr. E. A. Hardy (Salford South—Lab.) on October 24 asked the Minister of War Transport, whether, in view of the unsatisfactory rail facilities provided for female members of His Majesty's forces, especially on long journeys, he would take steps to reserve a coach for them and label it "not for public use."

Mr. Alfred Barnes (Ministry of War Transport) in a written answer stated: Arrangements are already in force for the reservation of accommodation on trains for parties of Service women numbering 20 or more, and also at terminal stations for duty parties when the number will fill one or more compartments. Moreover it is the railway companies' practice to reserve compartments for women passengers on long-distance night trains where experience has shown this is required.

### Transport for Prisoners of War

Sir Wavell Wakefield (St. Marylebone—C.) on October 23 asked the Secretary of State for War how many coaches and passenger-carrying vehicles, with seats in them, were being used to convey prisoners of war to and from their work.

Mr. J. J. Lawson (Secretary of State for War) in a written answer stated: In some isolated cases civilian motor coaches, up to a total of about four, have had to be hired to convey prisoners of war employed by the War Department to and from their work, when military or other load-carrying vehicles have been unavailable. As a general rule, only load-carrying vehicles, sometimes provided with temporary seats, or troop-carrying vehicles when available, are used for the purpose.

### Railway Fuel

Squadron-Leader Sir Gifford Fox (Henley—C.) on October 30 asked the Minister of Fuel & Power whether he had made any calculation of the additional fuel which had to be used by the railways to carry passenger and goods which would otherwise have been transported by road; and whether he had taken this fact into account in continuing to refuse to release a larger supply of petrol for general use.

Mr. E. Shinwell (Minister of Fuel & Power) stated in a written answer: It is my constant endeavour to release petrol so far as supplies permit. The Minister of War Transport has already, with my concurrence, taken steps to secure that goods

traffic is diverted to road transport as necessary to relieve the railways, and I can assure Sir Gifford Fox that the necessary use of goods and public passenger vehicles is not now restricted by lack of fuel. It is unlikely that an increased use of private vehicles could lead to any considerable saving of railway fuel.

#### Cross-Channel and Coastal Services

Sir Ralph Glyn (Abingdon—C.) on October 29 asked the Minister of War Transport what steps he was taking to free vessels usually engaged in cross-channel and coastal trade so that the present conditions of congestion and overcrowding could be improved.

Mr. Alfred Barnes in a written reply stated: A large number of these ships has been released in recent months. Some are operating already in the Irish Sea and Channel services, and others, which are still undergoing conversion, will be brought into service in the next few months. No more ships can be removed from military service at the moment without reducing the facilities for the return of troops for release, their carriage to and from the Continent on leave, and the transportation of essential personnel on duty. The position is kept under continuous review and additional ships will be released as soon as conditions make it possible.

Sir Ronald Ross (Londonderry—Co.) on October 29 asked the Minister of War Transport whether he was aware of the precarious nature of cross-channel services to Ireland because of the need for refits of many of the ships so engaged; and whether he would undertake that no ships restored to this service would be again withdrawn for Government service.

Mr. Alfred Barnes wrote in reply: I am fully aware of the position and everything possible is being done to strengthen the cross-channel services to Ireland. Only in the most exceptional circumstances would a vessel released for the Irish cross-channel services be again withdrawn for Government service.

Sir Ronald Ross (Londonderry—C.) on October 29 asked the Minister of War Transport how many of the "Ulster Monarch" class of cross-channel ships had

survived the war; what functions were they now performing; and how long it would be before they resumed their normal purpose of carrying cross-channel traffic between Belfast and Liverpool.

Mr. Alfred Barnes in a written answer stated: Two of the three "Ulster" class of cross-channel ships have survived the war. The *Ulster Prince* has been sunk. The *Ulster Monarch*, which was on Admiralty service, has now been returned to her owners for reconversion for commercial employment; it will be 7 or 8 months before she will be ready to resume her cross-channel sailings. The *Ulster Queen* was acquired by the Government for Naval service; she has been extensively converted and it is impracticable for the time being, in view of the present state of the shipyards, to undertake the substantial work necessary to restore her to a condition for normal passenger employment. Sir Ronald Ross will be aware that the Liverpool/Belfast service has now been restored with the ss. *Longford*, making three weekly runs in each direction. It is hoped shortly to make another ship available for this service and maintain nightly sailings on all weekdays in each direction.

#### L.M.S.R. Ferry Service

Mr. Garry Allighan (Gravesend—Lab.) on October 31 asked the Minister of War Transport whether he was aware that the ferry service between Gravesend and Tilbury, operated by the L.M.S.R. employed boats which ran overcrowded and in other ways were both inadequate and dangerous; and whether he would cause a public inquiry to be held.

Mr. Alfred Barnes (Minister of War Transport) in a written answer stated: No, sir. The ferry boats all hold passenger certificates issued by my department after survey by my surveyors, and I have no reason to believe that the boats are either inadequate or dangerous or that the numbers of passengers allowed by their certificates, which amount to 850 in one case and over 600 in two other cases, are exceeded. I should be glad if Mr. Allighan would send to me the evidence in his possession substantiating the allegations contained in the question.

#### L.N.E.R. Southern Area Police Parade



Sir Ronald Matthews, Chairman of the London & North-Eastern Railway, inspecting a parade of L.N.E.R. Southern Area police at Marylebone Station on October 26. Behind the Chairman are Mr. V. M. Barrington Ward, Divisional General Manager, Southern Area, and Mr. N. McK. Jesper, Chief of Police, Southern Area

#### Stornoway-Kyle of Lochalsh Steamer Service

Mr. Malcolm MacMillan (Western Isles—Lab.) on October 31 asked the Minister of War Transport if he would state, approximately, when the new vessel about to be built-up for David MacBrayne Limited for the Stornoway-Kyle of Lochalsh mail and passenger service would take up service on this route; and what was her maximum and her normal running speed.

Mr. Alfred Barnes in a written reply stated: A permit to contract with the shipbuilders for the construction of the vessel to which Mr. MacMillan refers was issued to David MacBrayne Limited by my Ministry on September 18. The completion date, speed and specification of the vessel will depend on the arrangements which David MacBrayne Limited concludes with the shipbuilders.

#### War Damage Contributions

Mr. H. Berry (Woolwich West—Lab.) on October 23 asked the Chancellor of the Exchequer when he expected to introduce the Bill, promised by his predecessor, Sir Kingsley Wood, dealing with war damage contributions from public utility undertakings.

Dr. Hugh Dalton (Chancellor of the Exchequer): Not at present. I am trying to simplify this Bill now that the risk of further war damage has disappeared.

#### Road Vehicles

Squadron-Leader Sir Gifford Fox (Henley—C.) on October 31 asked the Minister of War Transport how the total number of road vehicles of all types now taxed in this country compared with the average number paying tax in 1938, respectively.

Mr. Alfred Barnes stated in a written answer: Complete figures are not yet available, but from the latest returns submitted, it is estimated that at August 31, 1945, the total number of road vehicles of all types for which licence duty had been paid and licences were then current (excluding trade licences) was approximately 2,225,000. The corresponding figure at August 3, 1938, was 2,949,795 and the average for 1938 was 2,766,931.

#### War Trade at U.K. Ports

Mr. S. S. Awbery (Bristol Central—Lab.) on October 29 asked the Minister of War Transport if he could give the tonnage of cargoes handled, both imports and exports, by the dock workers throughout the United Kingdom during the period of the war.

Mr. Alfred Barnes stated in a written reply: It is not possible to give precise figures of cargoes handled by dock workers during the war or to distinguish between cargoes such as bulk grain, coal, and bulk oil, which are largely dealt with by mechanical means, and those which involve direct handling by dock labour, nor is it possible to say what proportion of cargoes have been handled under war conditions by civilian and military labour respectively. But Mr. Awbery may be interested to know that the total amount of dry cargo imports and exports including bulk cargoes passing through United Kingdom ports during the war amounted to about 250 million tons exclusive of the coastal trade and of military stores and equipment.

G.W.R. ACCIDENT AT BARMOUTH JUNCTION.—Several people received minor injuries when a passenger and a goods train on the Barmouth—Dolgelly Branch collided outside Barmouth junction on November 2.



## Institute of Transport Anniversary Luncheon

### President on need for greater accommodation

The Institute of Transport anniversary luncheon was held at the Connaught Rooms, Great Queen Street, London, W.C.2, on Tuesday, November 6. Sir Frederick Handley Page, C.B.E., President of the Institute of Transport, was in the Chair, and the principal guest was the Rt. Hon. Alfred Barnes, M.P., Minister of War Transport.

Sir Frederick Handley Page, in proposing the toast of the guests, coupled with the name of the Minister of War Transport, said that the luncheon was being held in celebration of the 26th anniversary of the Institute. Strictly, that anniversary fell on November 3, but it had been found convenient to hold the celebration on November 6. Next March members would be having a more social function, when it would celebrate the reading of the first paper before the Institute.

After mentioning by name a number of guests present at the luncheon, including Mr. Ivor Thomas, M.P., Mr. G. R. Strauss, M.P., Air Marshal Sir Ralph Cochrane and Brigadier General A. C. Critchley, he went on to refer to the President of the Institution of Civil Engineers, Mr. F. E. Wentworth-Sheilds, and Mr. W. K. Brasher, Secretary of the Institution of Electrical Engineers, which was the landlord of the Institute of Transport. He pointed out that the lease of the Institute of Transport would be falling due for renewal in eighteen months' time, and he hoped that it would be possible to arrange for greater accommodation thereafter. Other guests to whom he extended a welcome were Mr. Joseph Maclay, of the Institute of Shipping, and Sir Cyril Hurcomb, of the Ministry of War Transport. As the principal guest he welcomed the Minister of War Transport, Mr. Alfred Barnes.

Mr. Alfred Barnes, M.P., Minister of War Transport, confessed to some interest when he had discovered that the Ministry of Transport and the Institute of Transport had come into being about the same time and that the first President of the Institute, Sir Eric Geddes, also had been the first Minister of Transport. He was certain that the Institute, as in the past, would make a very important contribution to the transport problem of this country.

He hoped that in the transport industry the experience of the past six years would not be forgotten. It had been a great experience to bring together business personnel of all kinds into close and intimate association with the civil service of this country. In the years ahead it would be desirable for these two branches to work together.

Sir Frederick Handley Page, in thanking the Minister of War Transport for his speech, said that in this Institute they had a forum on which all subjects could be discussed. They could claim rightly that the Institute was like a group of fellows of a very august University. He and the members hoped that the Institute might have a home of its own. It was all very well to talk of a home hereafter, but they wanted to have an earthly home while they were still here. They were seeking a building where they could have a library and a meeting place for members and where students could meet together to discuss matters of mutual interest. The first thing it was necessary

to obtain was money. As they were all going to become civil servants in one form or another, he felt that before the railways and shipping companies and other transport companies were fully nationalised, it would be a good thing if the Institute could have the money for a home, so that the Institute could go down to history as a memorial of those Victorian days when people owned something themselves. He would like to put in a word with the Minister of War Transport for a consideration of this project, so that when all these things were being done, he would not forget the Institute of Transport.

Among those present were:—

Messrs. F. R. Aldous, G. L. Allaway, A. A. Allpress, C. Anderson, A. F. Andrews, L. C. Andrews, H. J. Ashby, Lord Ashfield of Southwell, P.C. (Past President), Mr. J. Atherton. Messrs. S. A. Bailey, M.B.E., G. S. Baker, The Rt. Hon. Alfred Barnes, M.P. (Minister of War Transport), Messrs. C. Barnes, C. B. Barratt, C. Barrington (Member of Council), C. D. Bartlett, F. D. Bartley, O. G. Bayliss, J. E. Beckett, R. P. Beddow, E. N. C. Bell, M. Bennett, D. P. Besley, F. C. Betts, N. Bezzant, R. Bezzant, R. P. Biddle, C.B.E. (Chairman, Awards Committee), F. E. Birch, F. T. Birch, J. M. Birch, R. W. Birch, H. J. Birkbeck, Colonel C. F. Birney, D.S.O., Messrs. C. A. Birtchnell, G. S. Bocquet, C.I.E., V.D., C. W. Bowers, A. Bradford, W. Bramham, J. W. S. Branner, W. K. Brasher (Secretary, Institution of Electrical Engineers), F. M. Brock, C. T. Brunner (Member of Council), J. C. Bryans, F. W. Buckman, Captain L. G. Burleigh, Messrs. J. B. Burnell, J. P. Burton, Lt.-Col. F. Bustard, O.B.E.

Messrs. D. C. Cable, M. A. Cameron, C. Campbell, M. Campbell, F. Cann, A. E. Cannon, A. F. R. Carling, C. A. Carr, A. L. Castleman, V. P. Ceresole, W. C. Chandler, A. S. C. Chatty, J. B. Chevallier, A. Chouffot, Lt.-Col. J. W. Dixon Clarke, Messrs. W. R. Clemens, H. Clutterbuck, M.B.E., J. W. Coats, W. E. Cobb, Air Marshal The Hon. Sir Ralph A. Cochrane, M.B.E., C.B., A.F.C., Messrs. W. T. Cockle, K.B.E., S. Cohen, R. C. Cole, H. Collins, L. H. Coney, A. R. Cooper, T. C. Coppin, O. H. Corble, T. Cornish, D. Cory Wright, H. O. H. Coulson, F. W. Crews (Secretary), H. J. Crisp, Brigadier General A. C. Critchley, C.B.E., Messrs. P. Croom-Johnson, R. F. C. Cropper, B. C. H. Cross, H. H. Crow, J. O. Cumming, Dr. Brysson Cunningham.

Messrs. E. A. Danlaw, S. B. Davenport, Ashton Davies, C.V.O., O.B.E., A. M. Davis, G. Cole Deacon, C.B.E., G. Dickinson (Member of Council), Group-Captain S. A. Dismore, Messrs. F. C. Dowles, H. C. Drayton, J. N. Drummond, C. E. W. Duley, C. S. Dunbar, Dr. P. Dunsheath (President, Institution of Electrical Engineers), Colonel E. G. Dutfield, Mr. H. T. Dutfield (Member of Council).

Messrs. W. J. Ellery, H. W. Elliott, Evan Evans, J. H. Ewer.

Messrs. Denys F. C. Fairclough, Guy T. M. Fairclough, J. L. Farmer, R. I. H. Farmer, E. M. Farrell, N. D. Fawcner, M.C., H. J. Ferguson, G. L. Fetherstonehaugh, Captain R. L. Fisher, R.N., Messrs. L. Flatt, A. Forsyth, W. W. Foster, C. Fountain, J. R. Fox, G. F. French, S. A. Fricker, E. H. Fryer, C. Furber.

Messrs. Sidney E. Garcke, C.B.E. (Past President), C. T. Gardner, A. H. Garside, W. H. Gaunt, C.B.E., J. S. Gavin, S. R. Geary, O.B.E., H. A. Gentry, L. C. Glenister, F. C. Glover, L. Godfrey, H. C. Godsmark, W. E. Goodwin, P. E. R. Graefe, W. S. Graff-Baker (Member of Council), E. Graham, A. H. Grainger, P. N. Gray, W. H. Gray, J. C. Griffiths, R. G. Grout, F. Gunn.

Sir Frederick Handley Page, C.B.E. (President), Messrs. J. B. Handyside, J. L. Harrington, M. W. Harris, A. Hastie, G. Hatcher, S. D. Heal, P. S. Henman, J. Hibbert, R. C. Hider, M.B.E., Sir William Hildred, C.B., O.B.E. (Director-General of Civil Aviation), Messrs. P. Maurice Hill, R. A. Hobday, S. R. Hobday, O.B.E., K. A. Hogan, Air Marshal Sir Leslie

Hollinghurst, K.B.E., C.B., D.F.C., Messrs. M. F. Horner, R. B. Hounsfield, R. E. Huffam, D. Hunt, Sir Cyril Hurcomb, K.C.B., K.B.E., Past President (Director-General, Ministry of War Transport), Messrs. E. Huskisson, J. E. Hutchinson, A. Hyman.

Messrs. A. J. Im Obersteg, W. J. Irons. Messrs. H. Jackson, W. T. James, O.B.E., F. D. Jenkins, Air Commodore R. B. Jordan, D.F.C., Mr. G. Mackenzie Junner.

Messrs. J. A. Kay, E. Kelsey, R. Kelso (Past President), S. Kennedy (Member of Council), H. Norman Kerr, J. A. Kirk, A. E. Kirkus, O.B.E., C. F. Klapper, S. F. Kneller.

Messrs. F. G. Laird, R. Lake, D. R. Lamb, E. Landragin, F. C. T. Lane, R. H. Lane, A. W. Lawson, O.B.E., R. K. Leeper, J. M. Leighton-Bailey (Member of Council), D. Lemon, W. C. Leslie-Carter, H. Norman Lettis, D. Leyland-Naylor, A. A. Logan, S. H. Loxton, A. Ludlow, F. Lydall.

Messrs. R. B. McDonald, Andrew McKay, Lt.-Col. D. C. McLagan, D.S.O., M.B.E., T.D., The Hon. Joseph P. Maclay (Vice-President, Chamber of Shipping), Messrs. C. J. Macpherson, T. Macpherson, M.P., R. G. Mair, H. O. Mance, Brig.-General Sir Osborne Mance, K.B.E., C.B., C.M.G., D.S.O. (Member of Council), Messrs. Oliver Mansfield, A. Marenbon, A. E. Marriott, J. T. Masterton, J. Mayell, H. Mayo, M.B.E., E. J. Meadon, S. J. Megenis, F. A. A. Menzler, F. R. Miller, J. G. C. Milligan, Major A. S. Mills, D. Mills, F. C. G. Mills, H. F. Minter, H. G. Morley, G. Morton, R. J. Munday, L. C. Murray.

Messrs. P. W. Nancarrow, A. A. Neil, L. H. K. Neil (Member of Council), S. W. Nelson, J. S. Nicholl, C.B.E. (Past President), H. Nicolaisen.

Messrs. A. Oldfield, F. J. Orchin, O.B.E., Lt.-Col. L. J. Osborne, Mr. G. E. Overell.

Messrs. A. Packham, E. E. Painter, A. H. Park, G. A. Park, J. F. Parke, G. E. Parker, J. B. Parker, F. Parsons, James Paterson, M.C., F. D. Pattison, W. W. Paul, W. G. Pavitt, A. C. J. Payne, S. E. Popler, W. M. Perts, R. E. Philp, J. R. Pike, E. Pitsoy, J. S. F. Pollitzer, G. J. Ponsonby, A. Porter, Captain J. Laurence Pritchard (Secretary, Royal Aeronautical Society), Messrs. P. R. Privett, J. W. Punter, H. C. Purnell, J. F. E. Pye, W. H. J. Pyne.

Messrs. E. W. Rainor, J. W. Ramsbottom (Educational Adviser), C. Rayner-Smith (Member of Council), W. Rees, F. J. Reynolds, T. F. Rice, G. S. Rider, M.B.E. (Member of Council), C. F. Roberts, V. A. M. Robertson, C.B.E., M.C., Sir Alfred Robinson, K.B.E., C.B. (a Vice-President), Messrs. J. T. E. Robinson, H. P. Robottom, H. Rossington, J. Rossick (Director of Public Relations, Ministry of War Transport), E. W. Rumbold, G. Rushton, G. D. Rushton.

Messrs. F. Sadler, Commander R. St. John, Messrs. A. J. Samson, W. O. Sayer, A. Scott, A. T. G. Scott, W. F. Seaward, C. J. Selway, C.V.O., C.B.E., T.D. (Hon. Treasurer), A. E. Sewell, R. W. Sewill, H. Shankland, F. Shaw, E. S. Shrapnell-Smith, C.B.E., B. H. Simmonds, E. C. Simon, G. F. Sinclair, C.B.E., F. G. Sketch, S. W. Smart, G. W. Quick Smith, H. W. Smither, F. J. Speight, Major R. O. Squarey, M.C. (Member of Council), Messrs. J. Stanger, W. S. M. Stapleton, W. J. Stevens, G. R. Stratton, G. R. Strauss, M.P. (Parliamentary Secretary to the Ministry of War Transport), J. J. Studd, P. W. Swindells, G. S. Szlumper, C.B.E., T.D. (Past President).

Messrs. P. J. R. Tapp, E. G. Thomas, Ivor Thomas, M.P. (Parliamentary Secretary, Ministry of Civil Aviation), W. Tichborne, J. R. Tildsley, T. Tilston, W. A. Timpson, F. W. Tipton (Member of Council), H. C. Tree, H. N. Trye, J. R. Turk, B. G. Turner, P. H. R. Turner.

Mr. E. Uzzell.

Mr. A. B. B. Valentine (Chairman, Henry Spurrier Memorial Committee).

Messrs. F. A. Walker, A. F. Wallis, E. J. G. Weare, J. S. Weatherby, Alex. J. Webb, A. E. Wells, C. M. Wentworth, F. E. Wentworth-Sheilds (President, Institution of Civil Engineers), H. E. O. Wheeler, O.B.E., Colonel R. B. H. Whitby, Messrs. E. Whiting, F. Whitmore, T. Williams, W. Cyril Williams, W. A. Willox, J. S. Wills (Member of Council), H. Wilmot, Brigadier E. Wilson, Major G. R. S. Wilson, Messrs. W. A. Winson, A. E. Wood, J. Lindsay Wood, Arthur Woodburn, M.P., A. V. Woolston, H. E. Wortham, A. J. Wright, M.B.E., W. Donaldson Wright (Member of Council), C. E. Wurtzburg, H. M. Wyatt.

Mr. Gerald Yorke.



## Notes and News

**Pan-American Railway Congress Postponed.**—The next Pan-American Railway Congress, the fifth of the series, which was planned to be held in Montevideo, Uruguay, during this month (November), has been postponed. It is now expected to be opened on April 5, 1946.

**Staff Required for Malayan Railways.**—Candidates for a number of positions on the Malayan railways are sought. They include workshop foremen, locomotive inspectors, chief permanent way inspectors, accounts inspectors and traffic inspectors. Employment is offered for three years, in the first instance, with prospect of permanency. For details, see Official Notices, page 495.

**L.N.E.R. Express Train Derailed.**—The second engine and 12 coaches of the 9.55 a.m. express passenger train from Bradford to Kings Cross was derailed at Carcroft, near Doncaster, at 11.15 a.m. on October 31, blocking both lines between Wakefield and Doncaster. No one was injured. The metals were dislodged and sleepers smashed. The main line between Kings Cross and Edinburgh was not affected.

**Lack of Lights on the S.R.**—Deliberate and destructive interference with lamps in Southern Railway trains is on the increase, and the work entailed in repairs is becoming beyond the capacity of the establishment. Cases of interference amount to over a hundred a day. The railway police are endeavouring to detect offenders, and passengers are requested to report any instance of wanton destruction which they observe with the object of apprehending the offenders.

**Engineering Vacancies in Malaya and Hong Kong.**—Applications are being sought for a number of vacancies for civil, mechanical, and electrical engineers in Malaya and Hong Kong. One of the qualifications for civil engineering appointments is experience of construction of railways or open-line maintenance. Candidates for mechanical engineering appointments should have had experience of locomotive running,

or of maintenance of heavy electrical generating plant, or of general workshop organisation. Electrical engineering candidates should have had practical experience of power generation and distribution and the manufacture of plant. For details, see Official Notices, page 495.

**Temiscouata Railway.**—From the head office at Riviere du Loup, Quebec, the Temiscouata Railway Bondholders Committee Limited is informed that the gross earnings of the railway for the four weeks ended September 10 were \$32,261 and \$27,736, respectively, compared with \$30,612 and \$26,182 respectively for the corresponding period of 1944.

**Exhibition of British Industrial Design.**—Further details have been announced of the 1946 Exhibition of Design in British Industry, referred to briefly in our issue of October 19 (page 406). The exhibition, which will open in London not later than July 1, 1946, will cover the design of all main ranges of consumer goods, including clothing, household and office equipment, and transport. In the transport section, exhibits will include interiors of civil aircraft and railway passenger coaches, ships' cabins, motorcar and coach bodies, and models of merchant ships. Travel goods will be included among the exhibits. The exhibition is sponsored by the Council of Industrial Design and will be financed by the Government.

**Canadian Pacific Railway Income Tax Relief.**—In connection with Canadian income tax relief, the Canadian Pacific Railway Company announces that as regards the dividends on the ordinary capital stock the Board of Inland Revenue has authorised provisionally the following relief from United Kingdom income-tax in respect of Canadian income-tax paid by the company in Canada, including the Canadian non-residents tax at 15 per cent.: For the year 1943-4, 6s. in the £, or one-half of the stockholder's "appropriate rate of U.K. income-tax," whichever is the lesser. (This applies only to the March 31, 1944, dividend on shares on the London register.)

For the year 1944-5, 6s. in the £, or one-half of the stockholder's "appropriate rate of U.K. income-tax," whichever is the lesser, on 90 per cent. of the dividends and 3s. in the £ on 10 per cent. of the dividends.

**Central Railway of Brazil Electrification.**—Further news from Rio de Janeiro indicates that the electrification loan which the Central Railway of Brazil has arranged with the São Paulo Federal Savings Bank (see our October 26 issue,

## British and Irish Railway Stocks and Shares

Stocks	Highest 1944	Lowest 1944	Prices	
			Nov. 6, 1945	Rise/ Fall
G.W.R.				
Cons. Ord. ....	62½	55	55	— ½
5% Con. Pref. ....	122½	114½	110	— ½
5% Red. Pref. (1950) ..	110½	104	103	— ½
5% Rt. Charge ....	135½	128	125½	+ ½
5% Cons. Guar. ....	134½	125	123½	+ ½
4% Deb. ....	118½	112½	113	— ½
4% Deb. ....	124½	114	113½	—
5% Deb. ....	137	129½	128	—
2½% Deb. ....	77	73½	81½	+ ½
L.M.S.R.				
Ord. ....	34½	27½	27	— ½
4% Pref. (1923) ....	64½	55	57	— ½
5% Pref. ....	81	72½	76	— ½
5% Red. Pref. (1955) ..	105½	102	101½	— ½
4% Guar. ....	107½	99½	101½	— ½
4% Deb. ....	111½	104	106½	+ ½
5% Red. Deb. (1952) ..	111	108	105½	+ ½
L.N.E.R.				
5% Pref. Ord. ....	10½	7½	6	— ½
Def. Ord. ....	5½	3½	3½	—
4% First Pref. ....	68½	55½	56	— ½
4% Second Pref. ....	35½	28½	27½	— ½
5% Red. Pref. (1955) ..	101	97½	98	— ½
4% First Guar. ....	101½	96½	101	— ½
4% Second Guar. ....	95½	88½	94	— ½
3% Deb. ....	88½	80½	91	+ ½
4% Deb. ....	110½	103½	105½	+ ½
5% Red. Deb. (1947) ..	105½	101½	101	— ½
4% Sinking Fund Red. Deb. ....	107	104½	104½	—
SOUTHERN				
Pref. Ord. ....	80½	71½	73½	— ½
Def. Ord. ....	26½	23	23	— ½
5% Pref. ....	122	113½	109	— ½
5% Red. Pref. (1964) ..	117½	112½	110½	— ½
5% Guar. Pref. ....	134	125½	123½	— ½
5% Red. Guar. Pref. (1957) ....	115½	112½	108½	— ½
4% Deb. ....	118	110	112	— ½
5% Deb. ....	135½	127	127	— ½
4% Red. Deb. (1962- 67) ....	111½	107½	107½	—
4% Red. Deb. (1970- 80) ....	112	108½	108½	—
FORTH BRIDGE				
4% Deb. ....	107	103	104	—
4% Guar. ....	106½	102	103	—
L.P.T.B.				
4½ "A" ....	125	119	120½	+ ½
5% "A" ....	133½	128	130½	+ ½
3% Guar. (1967-72) ..	99½	98	99	—
5% "B" ....	124½	118½	120½	+ ½
"C" ....	72½	64½	66	—
MERSEY				
Ord. ....	35½	33	32	—
3% Perp. Pref. ....	72	66	69	—
4% Perp. Deb. ....	105	103	104	—
3% Perp. Deb. ....	85½	79½	80	—
IRELAND*				
BELFAST & C.D.				
Ord. ....	9	6	7½	—
G. NORTHERN				
Ord. ....	33½	19	31	— 2½
Pref. ....	49	37	48½	— ½
Guar. ....	70	57½	78	— ½
Deb. ....	90½	81½	95	—
IRISH TRANSPORT				
Common ....	—	—	78	— ½
3% Deb. ....	—	—	100½	— ½

\* Latest available quotation



The above scene, on a train between Hanover and Hamburg, illustrates the present day travel in Germany

## OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 30 inclusive unless he is accepted from the provisions of the Control of Employment Order, 1945, or the vacancy is for employment excepted from the provisions of that Order.

## His Majesty's Colonial Service

IN addition to vacancies in Colonial Engineering Service already advertised there are now further vacancies in Malaya and Hong Kong for Engineers—Civil, Mechanical and Electrical. Professional qualifications entitling applicants to consideration, are Corporate Membership of I.C.E., I.M.E., or I.E.E. or, alternatively, possession of Engineering Degrees or Diplomas recognised by those bodies as granting exemption from Sections A and B of their examinations.

Candidates for Civil Engineering appointments should have had experience of construction of railways or open line maintenance; alternatively, they should have had experience of construction and maintenance of roads, or of Urban Water Supply and Drainage, or of Irrigation and Land Drainage. (Ref. E.2097A.)

Candidates for Mechanical Engineering appointments should have had experience of locomotive running or of maintenance of heavy electrical generating plant or of general workshops organisation. (Ref. C.2904A.)

Candidates for Electrical Engineering appointments should have had practical experience of power generation and distribution and manufacture of plant used therein; whilst candidates for Telecommunications

appointments should have had training in Telegraph, Telephone and Radio Engineering. (Ref. D.1535A.) Candidates must be British subjects, physically fit and should normally be between the ages of 25 and 40 years though contracts appointments may be offered to men whose age exceeds this upper limit. Salary scale for candidates appointed to pensionable posts on permanent staff rises from £560, by annual increments of £35 to £1,120 p.a., but initial salary offered will depend on age and experience. Promotion to a number of higher salaried posts may subsequently be made on merit. Those selected for contract appointments at special rates of salary will be entitled to gratuities on completion of their contracts.

Write, quoting appropriate reference number, to Ministry of Labour and National Service, Appointments Department, Technical and Scientific Register, Room 670, York House, Kingsway, London, W.C.2, for application form, which must be returned completed by November 30, 1945.

## Overseas Employment

STAFF required for Civil Administration, Malayan Railways, for 3 years in the first instance, with prospect of permanency. Candidates must not be more than 40 years of age. Free passages and quarters, Outfit allowance, £30. Salary, 325 Malayan dollars, rising to 500 Malayan dollars a month, and children's allowances, 30 Malayan dollars a month for the first child and 20 a month for the second. Malayan dollar = 2s. 4d.

page 434) will total 300 million cruzeiros. It is proposed to electrify 83 km. (52 miles) of suburban railway, extending from the Norte Station in San Paulo to Mogy das Cruzes. Two substations are to be built. The rolling stock will consist of 24 three-car units. It is hoped to complete the work in 18 months.

## Railways and State Air Services.

The following statement on the Government proposals to nationalise civil air services was made on November 2 on behalf of the railway companies: "Until the conversations which the Minister of Civil Aviation forecast in his statement in the House of Lords have taken place the railway companies have no comment to make."

## The British Electric Traction Co. Ltd.

—The directors of the British Electric Traction Co. Ltd. have declared the following interim dividends on account of the financial year ending March 31, 1946, payable on December 8, 1945: 6 per cent. cumulative participating preference stock, 3 per cent. actual (same), less tax; 8 per cent. non-cumulative preferred ordinary stock, 4 per cent. actual (same), less tax; deferred ordinary stock, 15 per cent. actual (same), less tax.

**Road Haulage Organisation.**—The Government has decided that the agreements with controlled undertakings and hired operators in the Road Haulage Organisation, and with the chartered operators in the Meat Section of the Organisation, shall be continued for the maximum period for which the agreements provided, that is, to the expiration of twelve months from the cessation of hostilities with Japan. The effect of this decision is that the Road Haulage Organisation will remain in being during this period. Formal notices under the agreements are being sent to the operators concerned.

## Sabotage on the Palestine Railways.

—Political troubles in Palestine last week seriously affected the Palestine Railways and all rail transport was at one period stopped. Railway tracks were cut at 150 places. An attack was made on Lydda Station, and a signal box, a train and three locomotives were damaged. The locomotive shed was set on fire and locomotives in the yard were mined. In the attack on this station it was reported that the railway staff lost two men killed and six were wounded. A train was held up by saboteurs on the line between Lydda and Jerusalem,

and an explosion caused by a time bomb shook Jerusalem and damaged the parcels office of the railway station. On November 4 a curfew from 5.30 p.m. to 5.30 a.m. was imposed on the coastal area and on the railways in it.

**Victoria Coach Station.**—During October the U.S. Army returned to British control 45 more premises in London. These included 4 garages, of which the principal was the Victoria Coach Station of 32,011 sq. ft.

**S.R. West Country Class Locomotives.**—Naming ceremonies for two of the latest Southern Railway ("West Country" class) engines were performed at Wadebridge and Padstow on October 31. The engines were named *Wadebridge* and *Padstow*.

**War Activities Exhibition.**—The English Electric Co. Ltd. announce the opening of an exhibition of a record of the company's war activities at Queen's House, Kingsway, London, W.C.2, on November 19. The exhibition will show features of £60 million worth of wartime electrical products which have been made for the nation in the company's works. Peacetime products also will be on view in a display of 50 of the most important groups. A special section of the exhibition will portray the research work in the electrical field undertaken by the company in recent years.

## National Road Safety Campaign.

A combined attack on the road-accident problem by Government departments, local authorities and the Royal Society for the Prevention of Accidents began last week-end with the launching of a national road safety campaign. Posters, films and advertisements, using the slogan, "Keep Death off the Road," are being used, and these will be supplemented by wireless talks and local activities. On the eve of the launching of the campaign, the Ministry of War Transport had dispatched to local authorities a letter urging a considerable extension of local safety activities, and offering Government grants at the rate of 50 per cent. of any approved expenditure. During the early stages, attention will be focused on the abnormal dangers caused by the change-over from war to peace. Accident figures for the first three months since the restoration of the basic fuel ration show that the upward curve of accidents already has begun. The figures

WORKSHOP FOREMEN—Boiler; Carriage, Wagon and Sawmill; Machine Shop and Tool Room; Erecting Shop; Millwright; Foundry; Locomotive Foremen (for Workshops and Running Sheds). (Ref. No. 5652A.)

LOCOMOTIVE INSPECTORS—with foot-plate experience. (Ref. No. 5652B.)

CHIEF PERMANENT-WAY INSPECTORS—with experience as Gangers or Sub-Gangers on a British Railway. (Ref. No. 5652C.)

ACCOUNTS INSPECTORS—must have a thorough understanding of the basic principles applied in accounting for Railway Traffic Revenue and have had practical experience in the detailed auditing of station accounts including the checks imposed on station returns in Headquarters Audit Offices. (Ref. No. F.A.87.)

TRAFFIC INSPECTORS—must have had several years' experience of coaching and goods traffic, both operating and accounts, and have a thorough knowledge of train working and signalling on single and double lines and a good knowledge of telegraphy. (Ref. No. F.A.88.)

Applications, which must be in writing, stating date of birth, full details of qualifications and experience including present employment; also Identity and National Service or other registration particulars, and quoting the appropriate reference no., should be addressed to the Ministry of Labour and National Service, London Appointments Office, 1-6, Tavistock Square, London, W.C.1.

for those killed and seriously injured have been: June, 3,012; July, 3,386; and August, 3,940.

**Southern Railway Company.**—The Southern Railway Company announces that on and after November 12 the address of the stock and transfer office will be 84, Tooley Street, London Bridge, S.E.1.

**Derailment on L.N.E.R.**—On November 1 two coaches of a L.N.E.R. Saluburn to Darlington passenger train left the points and overturned at Eaglescliffe. The weather was foggy. Several workmen travelling on the train were slightly injured, and two workmen more seriously hurt. One of the coaches, after leaving the rails, struck a telegraph pole and then demolished a fog signal cabin.

**The Dendy Marshall Railway Collection.**—By order of the Executors of the late Mr. Chapman Frederick Dendy Marshall, who died on June 14 last at the age of 72, the well-known and extensive Dendy Marshall Railway Collection of books, autograph letters, prints, pictures, maps, pottery, porcelain, glass, etc., relating to the history of railways and the locomotive, will be offered for sale by auction on Tuesday next, November 13, by Messrs. Sotheby & Co., at 34-35, New Bond Street, W.1. Catalogues, price 3d. each, are being prepared by the auctioneers but are not available as we close for press. Mr. Dendy Marshall's collection of railway historical material was among the finest in the country, and its disposal should attract widespread attention.

## Forthcoming Meetings

November 14 (Wed.).—The Institute of Welding, Enfield Technical College, Queensway, Ponders End, Enfield. 7.30 p.m. "Welded Construction and the Drawing Office," by Mr. H. V. Hill, M.Sc., A.M.I.C.E., A.M.I.Struct.E.

November 16 (Fri.).—The Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1. 5.30 p.m. "The Scientist in War-time," by Sir Edward V. Appleton, K.C.B., D.Sc., LL.D., F.R.S.

November 17 (Sat.).—The Permanent Way Institution, 39, Victoria Street, Westminster, S.W.1. 5.45 p.m. "Accidents," by Mr. L. Moore, O.B.E.

## Railway Stock Market

Business in stock markets remained fairly active, but movements generally have been small and indefinite; international political uncertainties have been an unsettling influence. British Funds showed a less decided trend; long-dated stocks after further gains tended to ease, and better demand developed for medium-dated stocks. Elsewhere, the Cable & Wireless and civil aviation decisions of the Government affected sentiment as they provided further evidence of Government control policy; and the assumption is that it is apparently only a matter of time before plans are brought forward affecting the other "nationalisation" groups. Colliery shares eased, and home rails lost ground; prior-charges as well as junior stocks moved slightly lower. Home rails were also unsettled by the civil aviation developments.

On the other hand, the latest events give no logical reason for an easier tendency in home rails. The recent improvement in the latter was based mainly on the belief that stockholders would be likely to receive "fair compensation" in the event of nationalisation; and there seems no reason to modify this view. Whatever the basis of Government control of Cable & Wireless and of the colliery companies, it cannot be assumed that similar terms will be brought forward for railway stockholders in due course. Special problems and considerations will apply to each industry which the Government singles out for nationalisation developments; and this applies also to compensation for stock-

holders. Moreover, it should be borne in mind that there is probably no other group of securities, holders of which are as numerous and embrace so many classes of stockholders as in the case of home rails. It can be safely assumed that when the time arrives the railway companies will make every effort to secure fair compensation. Meanwhile, the belief persists that railway nationalisation will not be brought forward for probably two years. The Government in any case will apparently have its hands very full in dealing with the schemes of nationalisation already announced; meanwhile the dividend position is safeguarded by the existing control agreement. Sentiment this week has been affected by the civil aviation policy of the Government, because in time civil aviation must be expected to become an important competitor for certain types of traffic. The reaction in home railway stocks, however, has arisen mainly from falling off in demand. Selling generally was moderate, and the easier tendency was in line with the surrounding trend of markets.

Compared with a week ago, Great Western receded from 55½ to 55, the 5 per cent. preference from 111 to 110, and the 4 per cent. debentures at 113 lost an earlier fractional gain. L.M.S.R. was ½ down at 27, and the 1923 preference was ½ lower at 57½, but the 4 per cent. senior preference a 76 was unchanged on balance. L.M.S.R. 4 per cent. guaranteed, however eased to 102; the 4 per cent. debentures held their rise to 107.

L.N.E.R. preferred and deferred were

fractionally lower, and the second preference declined ½ to 28 and the first preference a point to 56; the 3 per cent. debentures remained at 91, but the 4 per cents. eased ½ to 106. Among Southern issues, the deferred was 23, compared with 23½ a week ago, the preferred unchanged at 73½; but the 5 per cent. preference at 109½ and the 4 per cent. debentures at 112 were fractionally easier. In contrast, London Transport "C" stocks were firm generally, with the "C" maintained at 66. Elsewhere, Metropolitan Assented held the rise to 60, and Metropolitan Surplus Lands 10s. shares improved to 9s. 9d.

Argentine railway stocks remained out of favour pending clarification of the political situation. Nevertheless, selling was not heavy, and debenture stocks were inclined to attract buyers following earlier declines. Buenos Ayres Great Southern was maintained at 11, but the 5 per cent. preference was 24, compared with 24½ a week ago, and the 4 per cent. debentures 64, compared with 64½. Buenos Ayres & Pacific 4 per cent. debentures eased to 75½ and Buenos Ayres Western 4 per cent. debentures to 56½. Central Argentine 5 per cent. debentures were 62½ and Argentine Great Western 5 per cent. debentures went back to 61. Elsewhere, however, Brazilian railway stocks became firmer, with San Paulo ordinary 54, and Leopoldina 4 per cent. debentures 55. United of Havana 1906 debentures eased to 17. Canadian Pacific reflected the better tendency in dollar stocks and were ½ higher at 19½.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week		No. of Week	Aggregate traffic to date			Shares or Stock	Prices					
				Total this year	Inc. or dec. compared with 1943/4		Totals		Increase or decrease		Highest 1944	Lowest 1944	Nov. 6 1945	Yield % (See Note)		
							1944/5	1943/4								
South & Central America	Antofagasta (Chili) & Bolivia	834	28.10.45	£ 24,670	—	£ 8,210	43	1,276,730	1,230,190	+	£ 46,540	Ord. Stk.	13½	9½	10½	Nil
	Argentine North Eastern ...	753	27.10.45	19,677	+	3,081	17	325,687	299,125	+	26,562	—	6½	4½	8	Nil
	Bolivar ...	174	Sept., 1945	4,668	—	570	39	44,105	47,755	—	3,650	6 p.c. Deb.	18½	7½	8½	Nil
	Brazil ...	—	—	—	—	—	—	—	—	—	—	Bonds	19½	15	22½	Nil
	Buenos Ayres & Pacific	2,771	27.10.45	122,187	—	8,437	17	2,099,000	2,049,750	+	49,250	Ord. Stk.	7½	3½	5½	Nil
	Buenos Ayres Great Southern	5,080	27.10.45	181,062	—	7,687	17	3,248,938	2,929,500	+	319,438	Ord. Stk.	14½	9½	11	Nil
	Buenos Ayres Western	1,924	27.10.45	76,250	—	4,937	17	1,191,812	1,150,375	+	41,437	—	13½	9½	9½	Nil
	Central Argentine ...	3,700	27.10.45	185,346	+	26,478	17	3,226,037	3,012,065	+	213,972	—	10½	6½	8	Nil
	Do	—	—	—	—	—	—	—	—	—	—	Divd.	43	3	4	Nil
	Cent. Uruguay of M. Video	972	27.10.45	34,964	+	4,145	17	581,477	523,918	+	57,559	Ord. Stk.	5½	4	6½	Nil
	Costa Rica ...	262	Sept., 1945	28,214	+	7,228	14	91,367	74,301	+	17,066	Stk.	17½	14½	15	Nil
	Dorada ...	70	Sept., 1945	29,800	—	50	39	273,135	237,415	+	35,720	1 Mt. Deb.	101	101	101½	£5 10/3
	Entre Rios ...	808	27.10.45	26,412	+	5,581	17	444,381	399,056	+	45,325	Ord. Stk.	6½	4½	6½	Nil
	Great Western of Brazil	1,030	27.10.45	29,100	+	3,000	43	1,056,000	920,500	+	135,500	Ord. Stk.	38/-	23/3	26/6	Nil
	International of Cl. Amer.	794	Sept., 1945	\$615,723	+	\$122,464	39	\$6,867,641	\$5,799,919	+	\$1,067,722	—	—	—	—	Nil
South & Central America	Interoceanic of Mexico	224	Oct., 1945	6,135	—	752	43	62,380	78,218	—	15,838	1st Pref.	1½	1	1	Nil
	La Guaira & Caracas...	1,918	27.10.45	59,989	+	15,858	43	2,275,311	2,010,268	+	265,043	5 p.c. Deb.	88	79	76½	£6 10/9
	Leopoldina ...	483	21.10.45	ps 549,600	+	ps. 99,200	16	ps 10,422,200	ps. 7,916,900	+	ps. 2,505,300	Ord. Stk.	5½	4½	4	Nil
	Mexican ...	319	Sept., 1945	18,431	+	2,169	13	55,363	51,326	+	4,037	Ord. Stk.	75/10	65/10	76/-	£3 11
	Midland Uruguay ...	382	31.10.45	9,836	+	1,454	43	155,922	149,724	+	6,198	Ord. Sh.	75/10	65/10	76/-	£3 11
	Nitrate ...	113	Sept., 1945	4,379	—	1,042	13	15,562	18,480	—	2,918	—	—	—	—	Nil
	North Western of Uruguay	274	26.10.45	£58,264	—	£2,382	17	£1,036,400	£989,012	+	£47,388	Pr. Li. Stk.	79½	68	78½	£7 12/10
	Paraguay Central ...	1,059	Sept., 1945	139,630	+	9,703	13	422,833	375,652	+	47,181	Pref.	9	10	9½	Nil
	Peruvian Corporation	100	Sept., 1945	£82,000	+	£10,000	12	£271,000	£247,000	+	£24,000	Ord. Stk.	57½	46	54	£5 11/1
	Salvador ...	153½	—	—	—	—	—	—	—	—	—	Ord. Stk.	57½	46	54	£5 11/1
	San Paulo ...	156	Sept., 1945	2,465	—	240	13	6,665	8,240	—	1,575	Ord. Sh.	21/3	13/9	16/3	Nil
	Talca ...	1,301	28.10.45	41,183	+	2,854	17	734,907	801,915	—	67,008	Ord. Stk.	4	2½	1½	Nil
	United of Havana	73	Sept., 1945	1,634	+	325	13	5,031	4,199	+	832	—	—	—	—	Nil
	Uruguay Northern ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Nil
	Canada	Canadian National ...	23,569	Sept., 1945	7,087,600	—	470,000	39	65,464,000	65,629,600	—	165,600	—	—	—	—
Canadian Pacific		17,030	31.10.45	2,007,600	+	22,400	43	53,065,400	53,222,800	—	157,400	Ord. Stk.	17½	13½	20	2½
Various	Barsi Light ...	202	Sept., 1945	17,842	—	2,977	25	145,230	140,130	+	5,100	Ord. Stk.	129½	97½	126½	£3 11/2
	Beira ...	204	Aug., 1945	76,111	—	9,694	48	846,863	899,876	—	53,013	—	—	—	—	Nil
	Egyptian Delta	607	20.9.45	3,637	—	287	25	274,247	309,453	—	35,206	Pr. Sh.	7½	5½	9½	£5 18/10
	Manila ...	—	—	—	—	—	—	—	—	—	—	B. Deb.	63½	58	68	Nil
	Midland of W. Australia	277	Sept., 1945	15,818	—	4,876	12	45,287	60,947	—	15,660	Inc. Deb.	101½	99½	95½	£4 3/9
	Nigeria ...	1,900	23.6.45	50,627	—	14,001	12	835,979	777,161	+	58,818	—	—	—	—	Nil
	Rhodesia ...	2,445	Aug., 1945	506,011	—	45,150	48	5,552,569	5,922,969	—	370,400	—	—	—	—	Nil
	South African	13,301	29.9.45	1,040,031	+	122,483	26	25,801,833	22,511,373	+	3,289,960	—	—	—	—	Nil
Victoria ...	4,774	April, 1945	1,285,324	+	96,325	—	—	—	—	—	—	—	—	—	Nil	

Note. Yields are based on the approximate current price and are within a fraction of ½. Argentine traffic is given in sterling calculated @ 16 pesos to the £.

† Receipts are calculated @ 1s. 6d. to the rupee.